Industrial Standardization

and Commercial Standards Monthly

July 1942

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Industrial Standardization

And Commercial Standards Monthly

Published Monthly by

American Standards Association

29 West 39th Street, New York, N. Y.

with the cooperation of the National Bureau of Standards

RUTH E. MASON, Editor

Our Front Cover: Photo by Charles Phelps Cushing

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ASA

Reg. in U.S. Pat. Off.

Standardization is dynamic, not static. It means not to stand still, but to move forward together.

Subscription price $4.00 per year (foreign $5.00); Special to schools and libraries $2.00 (foreign $3.00); single copies 35 cents

July, 1942 Vol. 13, No. 7

Entered as Second Class Matter February 14, 1941, at the Post Office at New York, N. Y., under the Act of March 3, 1879.

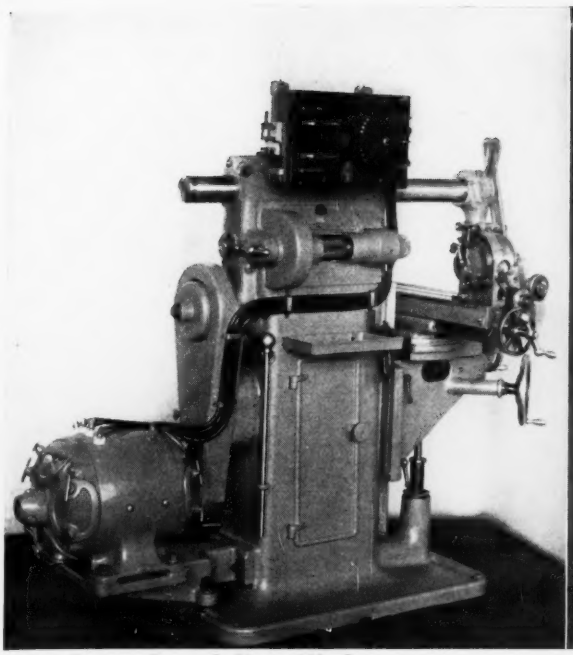
Help Win the War with Standards

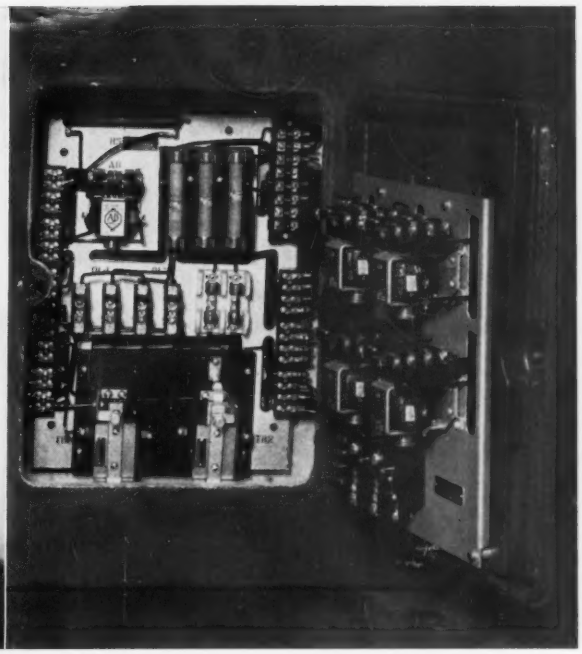
"AS AMERICANS we want to eliminate all possible confusions. We must utilize *all* our people, *all* our productive capacity, *all* our materials in top efficiency.

"In days like these there is little or no excuse for the specification of nonstandard materials.

"We must concentrate on standard materials through the use of standard specifications."

—American Society for Testing Materials





Photos Courtesy Brown & Sharpe Mfg Co

Live electrical parts were left exposed in early machine tool electrical installations, as in this application of a motor to a milling machine designed for belt drive.

In modern design electrical parts are enclosed. Note front of panel wiring, which simplifies tracing any connection.

War Standard Coordinates Requirements For Machine Tool Electrical Connections

WPB orders machine tool production to follow requirements of American War Standard for electrical equipment

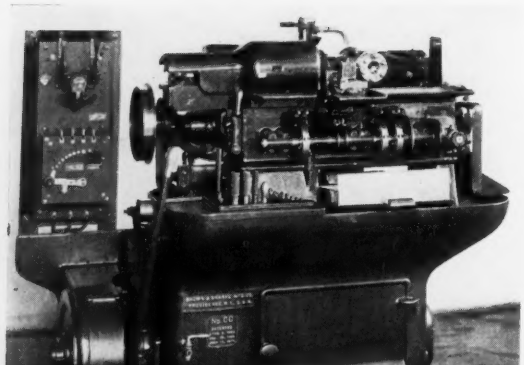
by B. P. Graves

Chairman, ASA Emergency Technical Committee on Machine Tool Electrical Standards

THE enormous demand for machine tools for the war program, which shot production from a normal output of $150,000,000 per year in 1939 to $750,000,000 in 1941, brought to a crisis the need for coordinated specifications and safety provisions for electrification of machine tools. Work on such specifications had been going on since the first World War, but the result had been a confusion of requirements, some of which actually created unnecessary hazards to operator and machine, and even slowed production and installation of the machines themselves.

The urgent need for clarification to eliminate any unnecessary delays in the war program has now resulted in approval by the American Standards Association of an American War Standard, Machine Tool Electrical Standards, which has become a part of the official war production effort through a War Production Board order effective July 15. The order prohibits production of tools calling for special electrical specifications, and directs that, with few exceptions, machine tool builders shall comply with the American War Standard, Machine Tool Electrical Standards.

The standard itself was developed by the National Machine Tool Builders' Association which requested the American Standards Association to carry it through the ASA Emergency Procedure. Through this procedure the electrical equipment manufacturers, the machine tool builders, and the



An old style mounting of electrical control to automatic single-spindle screw machine.

Here is an example of the first forward step in the development of enclosed control. Motor and control increase the floor space required and protrude into the aisle.

users of machine tools, together with representatives of ASA committees, such as the committees on the National Electrical Code, Rotating Electrical Machinery, and Electrical Industrial Control Apparatus, were brought together, differences of opinion were ironed out, and agreement reached on the final document.

The importance of the achievement in completing the standard is evident in the long history of the problems encountered in electrifying machine tools.

Machine tools were originally designed for belt drive. The application of motors and electrical control to them was difficult, because the right types of motors were not readily available and because the electrical controllers of that day were intended for other kinds of service and were not well adapted to the shop atmosphere of iron dust and coolant spray.

World War Encouraged Electric Drive

The world war of 1917-18 brought a sudden and intense demand for electric drive, however, because machine tools run by electricity could be more quickly installed without overhead line shafts and countershafts, and the machine could be shifted if necessary to another place in the shop with the least delay and confusion.

Naturally there were many types of machine tools on which motors could be mounted only with difficulty. Controllers were applied by mounting them to wrought iron or angle straps, bolted to the machine. Motors were often near the floor, where they were near the splash of mopping and exposed to damage by trucks. Conduit and junction boxes were unknown, no niceties of control were indulged in, and live electrical parts were exposed on motor and control alike.

As time went on, the cooperation of machine tool builders, electrical manufacturers, and customers led to rapid improvement and development. Mechanical interlocks, pick-off gears, and clutches were in many cases replaced by ingenious electrical devices. Machine tool builders found it to their advantage to employ electrical engineers to supervise what was rapidly becoming an integral and important part of the machine.

At the same time manufacturers of motors and control found it advisable to develop special motors and control for the growing machine-tool field. Rapid strides were made in building planer drives which could withstand the demand for fast reversals of the planer table and the need for a high-speed range, combined with high torque at low speeds. Such equipment must withstand thousands of operations a day without requiring constant care.

The development of fractional-horsepower motors for domestic appliances enabled the machine tool builder to give his customer power traverse and power feeds in a simple way and without complex mechanical parts. The constant demand for special machines led to the design of many forms of compact units or sub-assemblies, each

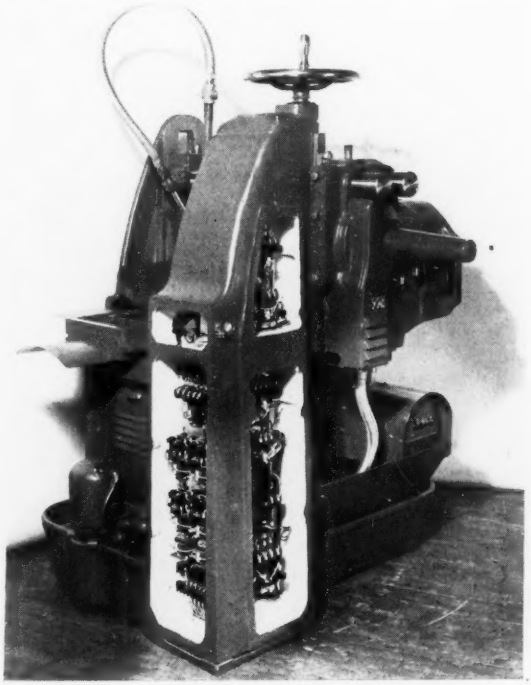
Copies of the American War Standard, Machine Tool Electrical Standards (C74-1942) are available from the American Standards Association at 40 cents per copy. Members of the American Standards Association are entitled to 20 per cent discount on all approved American Standards purchased through the ASA office.

complete with motor, control, and wiring, which could be applied to special bases to form milling, drilling, or broaching machines, especially suited to the particular job to be done.

There was a growing tendency for large users of electrically driven machine tools to write their own specifications. They were based on experience. Every provision in these specifications was based on some failure of equipment in the shop. They varied widely, as each electrical engineer drew on his ingenuity to find ways to give the operator and machine greater safety, and to afford accessibility for maintenance and repair while protecting the motor and control against damage, oil, or moisture.

But the growing list of special and varied specifications gradually presented a difficult problem to the machine tool builder. He would have been content to follow any one of them, but they varied on almost every point, and to read through twenty or thirty pages of specifications before wiring the machine tool, and to have to buy the equipment specified instead of using what he had on hand became a serious source of added manufacturing cost and delay. When the customer's specifications imposed details inherently unsuited to the machine in question lengthy correspondence ensued, and finished machines clogged the assembly floor awaiting the final decision.

Added to this confusion was the activity of local inspectors who, guided by the provisions of the National Electrical Code, called for strict compliance to that code, notwithstanding the fact that it was written primarily for electrical work in homes and factories, and not on machine tools. Certain code provisions, literally applied, actually created unnecessary hazards to operator and



This modern design, in which the control is mounted within the base or column of the machine, is the type of installation covered in the new American War Standard.

War Production Board Order L-147 prohibits production of machine tools calling for special electrical specifications, and defines standard specifications as those established in the American War Standard Machine Tool Electrical Standards (C74-1942). It is expected to expedite increased production of machine tools through simplification of manufacturing specifications, the WPB announces.

"Machine tool purchasers," the WPB declares, "have made a practice of developing their own specifications, with the result that the tool maker was forced to spend time and effort in analyzing the specifications and re-adapting his production processes for each new order."

Certain exceptions to the regulations are listed in the order. These include orders placed by the Army, Navy, or Maritime Commission for their own use, and orders authorized by the War Production Board. Permission for the latter will be considered only if a letter setting forth the reasons why special electrical specifications are necessary is sent in triplicate addressed to the Tools Branch, Ref: L-147, War Production Board, the WPB explains.

For orders received prior to July 15 calling for special electrical specifications, provision is made for delivery if the tool builders' engineering department had approved the specification prior to the date of issuance of the order (July 10, 1942). Likewise, delivery may be made if the special order, control, wiring or other device has already been received by the builder or will be received within 30 days after issuance of the order.

If the machine is ready for delivery but is held up because of non-delivery of special equipment, the builder must request the purchaser to take the equipment normally applied by the builder to his machines. If the purchaser declines, the machine is to be shipped with standardized equipment to the next order scheduled under General Preference Order No. E-1-b for which the tool is suitable. Exception to this regulation is made only through permission of the WPB.

Order L-147 was issued following discussions by War Production Board officials with members of the Machine Tool Industry Advisory Committee.

machine. Local codes, state codes, the Canadian electrical specifications, and the complex stipulations of various Government bureaus and departments served to make the problem of the machine tool builder very complex. Materials well suited to his needs might not be acceptable. New methods and materials might often have been applied with good effect but the provisions of specifications, codes, and approvals lagged behind.

With the growing pressure of the defense program and the demand for large numbers of machine tools for the manufacture of airplane engines for England and France in 1939, the Committee on Electrical Problems of the National Machine Tool Builders' Association undertook a search for the least common denominator of these various codes and specifications. The preliminary draft embodied the best of these provisions. It was submitted to the companies in the Association for comment and criticism. After revision, it was accepted as an Association standard. In April, 1941, at a joint meeting with the electrical engineers from machine tool plants and from the large users of machine tools, the Standards were discussed, item by item, and still further revised. The committee also met with the Article 430 Committee of the National Electrical Code, and later with a technical subcommittee set up for the purpose, to discuss the possibility of writing Code provisions which would apply especially to the electrification of metalworking machines.

The enormous demand for machine tools for the war program added importance and urgency to this work. From a normal output of $150,000,000 per year the industry went to $200,000,000 in 1939, more than doubled its output to $450,000,000 in 1940, and climbed to $750,000,000 in 1941. For 1942 the goal is almost double the 1941 production! This tremendous outpouring of highly developed machine tools of hundreds of types, with all the special tools, attachments, and accessories required, was secured without compromising with standards of safety or of accuracy. The machine tool industry is deeply resolved, not only that the American soldier, sailor, and flyer shall have the weapons they need for victory, but that each weapon, each ship, each plane, shall be the finest that the ingenuity of a great industrial nation can produce.

In effective cooperation with our own engineers, an ASA Emergency Technical Committee has studied and revised these Standards for acceptance as an American Emergency Standard, C74-1942.

A very able joint committee has written a proposed Article 670, which has been submitted to Alvah Small, chairman of the sectional committee in charge of the National Electrical Code, C1, for formal inclusion in that code, and to govern particularly the application of motors, wiring, and control to machine tools.

Canada Cooperates

The Canadian Engineering Standards Association has also given us splendid cooperation in order to avoid delay in securing machine tools for the plants of our allies across the border.

Only the machine tool builder, straining every resource to increase still further the production of the machine tools that are the foundation for victory, fully appreciates the value of these Standards. They will speed up our work and give to each of our customers in this country and abroad the assurance that his machine will embody the best electrical equipment available, properly installed.

I am happy to avail myself of this opportunity to express to the busy men from electrical companies, from many large user companies, from Canada, from the staff of the American Standards Association, and from our own busy machine tool plants, our sincere appreciation for their patient, skilled, and kindly cooperation.

Ball Is ASTM President, Bates Is Vice-President

H. J. Ball, Professor of Textile Engineering, Lowell Textile Institute, succeeded G. E. F. Lundell as president of the American Society for Testing Materials, it was announced at the ASTM Annual Meeting, held at Atlantic City, June 22 to 26. P. H. Bates, chief of the Clay and Silicate Products Division, National Bureau of Standards, was chosen vice-president to serve with Dean Harvey, Materials Engineer, Engineering Laboratories and Standards Department, Westinghouse Electric and Manufacturing Company, who was elected vice-president in 1941.

More than 55 new tentative standards were approved for publication as tentative and some 70 existing tentative specifications are to be referred to letter ballot of the Society for adoption as standard. It is expected that these standards will be published in the ASTM Book of Standards which is scheduled for publication in November of this year. Including six emergency specifications, the 1942 Book of Standards will include some 1100 specifications, test methods, and recommended practices, it was announced. Some 50 of these specifications have been affected by emergency alternate provisions designed to expedite procurement or to conserve critical and strategic materials.

More than 1300 ASTM members, committee members, and guests attended the various sessions and committee meetings.

Illumination Terminology Revised—

Marks New Step In Language Development

by E. C. Crittenden

Chairman, IES Committee on Nomenclature and Standards

EACH trade and profession has its jargon—terms and usages which are held sacred by the specialists although they may be unfamiliar and seem unreasonable to those in other fields of work. A living language grows and the new shoots it puts out are often neither symmetrical nor logical. In a new profession, however, there is some chance of guiding the development of specialized language.

When Illuminating Engineering attained the dignity of having a special society, that organization included a number of men interested in terminology. Consequently, the Illuminating Engineering Society early in its history formed a Committee on Nomenclature and Standards, and through its activities the Society has had a great influence upon the technical language of illumination both in this country and abroad.

The committee published a provisional set of definitions in 1910. This was revised and enlarged in 1912, 1915, 1916, 1917, 1918, 1922, 1925, and 1932. The reports of 1922, 1925, and 1932 were approved as American Standards by the American Standards Association, the Illuminating Engineering Society being designated as sponsor for revisions under the procedure of the Association.

Practical Language Important

While the IES committee carrying on the work has included representatives of physics and other sciences and of the teaching profession, it has taken the view that its primary purpose is to help in the development of the language of practical engineering. Usages which are well established can not be readily overturned. It is more important to have a set of terms accepted for general use than to have them logically perfect. Many reforms of practice have been brought about gradually, but current usage as represented in the present revision of the standard still does not have the consistency that might be attained in a system set up anew.

This particular point is emphasized because the new revision has incorporated a set of terms for the phenomena of radiation, and the analogous terms in radiation and in illumination are not alike in form; for example, the analogy of "radiation" should be "lumination" instead of "illumination". The possibility of making the terminology in these related subjects more harmonious will be illustrated in a forthcoming report of the Committee on Colorimetry of the Optical Society of America, proposing terms in two parallel series similarly formed.

The IES Committee has been tied in with several ASA sectional committees on related subjects. The definitions in the IES report constitute Group 55—Illuminating Engineering in the report of the Sectional Committee on Electrical Definitions, ASA C42-1941, which has just been published as American Standard Definitions of Electrical Terms (C42-1941) by the sponsor, the American Institute of Electrical Engineers. Incidentally, the system of numbering adopted by the ASA committee has been followed in the IES publication. Most of the fundamental definitions included in the American Standard nomenclature have also been adopted by the International Commission on Illumination, and are included in multilingual vocabularies compiled by that Commission and by the International Electrotechnical Commission.

The committee of the Illuminating Engineering Society which prepared the new American Standard has also served as a subcommittee of ASA Sectional Committee Z10 on Letter Symbols and Abbreviations for Science and Engineering, and

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The American Standards Association recently approved a revision of the American Standard, Illuminating Engineering Nomenclature and Photometric Standards (Z7.1-1942). This revision marks a step in a long process of evolution in this field.

ASA Committee Covers Wide Field on Symbols and Abbreviations

The ASA Sectional Committee on Letter Symbols and Abbreviations (Z10), of which the committee on Symbols for Mechanics (see page 195) is a subcommittee, has eleven subdivisions working on standard symbols in different fields.

H. M. Turner, Yale University, is chairman of the committee; Dr. Sanford A. Moss, General Electric Company, is vice-chairman; and H. W. Samson, General Electric Company, is secretary.

The subcommittees, and chairmen are:

Z10.1 Mathematics. A. A. Bennett, Brown University

Z10.2 Hydraulics. J. C. Stevens, Consulting Engineer

Z10.3 Mechanics. R. E. Peterson, Westinghouse Electric & Manufacturing Company

Z10.4 Structural Analysis. A. Haertlein, Harvard University

Z10.5 Heat and Thermodynamics. S. A. Moss, General Electric Company

Z10.6 Photometry. E. C. Crittenden, National Bureau of Standards

Z10.7 Aeronautics. G. W. Lewis, National Advisory Committee for Aeronautics

Z10.8 Electrical Quantities. J. F. Meyer, National Bureau of Standards

Z10.9 Radio. H. M. Turner, Yale University

Z10.10 Physics. H. K. Hughes, Columbia University

Z10.11 Abbreviations. G. A. Stetson, American Society of Mechanical Engineers

In addition to the work done by the Subcommittee on Mechanics for Solid Bodies, a new standard on Hydraulics (Z10.2-1942) has just been completed and published, and a revision of the Abbreviations for Scientific and Engineering Terms (Z10.1-1941) was completed last year.

The work of the ASA Sectional Committee on Letter Symbols and Abbreviations is going forward under the leadership of the American Society of Mechanical Engineers, American Association for the Advancement of Science, American Institute of Electrical Engineers, American Society of Civil Engineers, and the Society for the Promotion of Engineering Education.

the photometric symbols which it has adopted will be, in effect, a part of the report of the Z10 committee. Other symbols used in the report have been adopted by agreement with a coordinate subcommittee on Symbols for Heat and Thermodynamics whose chairman, Dr. Sanford A. Moss, has been foremost in furthering uniformity of practice in this respect. The complete report of that subcommittee, to be published by the American Society of Mechanical Engineers, will include a set of General Principles governing the use of letter symbols, as adopted by Sectional Committee Z10. The abbreviations in the IES reports have also been included in the American Standard Abbreviations for Scientific and Engineering Terms (Z10.1-1941). In brief, the new revision illustrates to a notable degree the cooperation and coordination between related fields of activity which is one of the prime purposes of the American Standards Association.

New Handbook Gives Data For Building Inspectors

A handbook for building inspectors, *Modern Building Inspection*, sponsored by the Pacific Coast Building Officials Conference, has just been published by R. C. Colling and Associates, Los Angeles. The book deals with problems ordinarily encountered by the building inspector in his office routine, plan checking, and field inspection practice. One chapter describes a building code, the method of compilation and adoption, interpretation, maintenance, and enforcement. Main sections cover the building inspector and his job, structural engineering for the building inspector, and legal problems in connection with building code enforcement.

The handbook faces up-to-the-minute problems presented by the war by including suggested ordinances for air-raid precautions, for blackout procedures, suggested basic principles for gas protection, and for air-raid shelters. The section on selected ordinances, basic standards and procedures reproduces the American Standard Specifications for Industrial Accident-Prevention Signs, as well as including such miscellaneous material as tables of suggested salaries for building department personnel, suggested ordinances for smoke abatement, for qualification of welders, and for prevention of sabotage, as well as many others.

A blibliography, pages 329 to 376, gives the building inspector current references to the literature of his field, as well as to defense data such as air raid protection, effects of bombs on buildings and structures, emergency housing, etc. The book is profusely illustrated.

Copies are available from R. C. Colling and Associates, 124 West Fourth Street, Los Angeles, California, at $5.00 each.

Good lighting speeds production.

Industrial Lighting Standard Helps Maintain Efficiency

by Henry B. Dates[1]

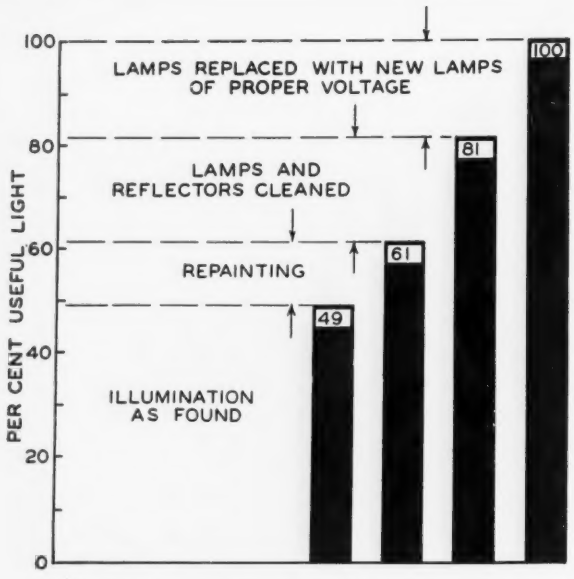
Chairman, ASA Sectional Committee on Industrial Lighting

WITH industry moving forward at an accelerated pace to meet war's needs, the publication of the American Recommended Practice of Industrial Lighting is most timely. For within the covers of this 50-page book is a wealth of material designed to be of practical help to industry and to those whose talents help industry with problems of construction, production, maintenance, and all the other factors which collectively spell efficiency.

Since industry's problem today is one of time and manpower, it is logical that Chapter I of the new American Practice should deal with the advantages of good lighting. Experience and research have both shown the close relationship between good lighting and individual efficiency; consequently, heading a list of nine advantages of good lighting are those of greater accuracy and more production with less spoilage, and hence reduced costs.

Important, likewise, is the matter of floor space, and it is pointed out that good lighting makes every square foot of floor area available for work tasks. Other factors such as supervision, morale, cleanliness, greater ease of seeing, and fewer accidents are also discussed as products of good lighting. The latter two have a timely significance to industry now that the older men are returning to lend their skill to the production demands of the present. Skill is the product of time, adaptability, and application. Unfortunately time, which transforms the novice into the craftsman, likewise takes its toll in reduced visual efficiency. In a word, older workers need the benefits of good lighting even more than younger

[1] Chairman, Lighting Practice Committee, Illuminating Engineering Society.



Lighting systems require upkeep the same as any other mechanical equipment if top efficiency is to be maintained. This diagram shows the improvement in lighting efficiency from painting, cleaning, and relamping.

employees. With good lighting, the possibility of accidents is decreased at a time when every man hour means so much.

These benefits only obtain where the lighting is of good quality, and the factors essential to good quality are next discussed. In this discussion it is pointed out that the factors most likely to interfere with quick and accurate seeing are those having to do with glare, diffusion, direction, and distribution.

Glare is the most common offender. It is really negative light or light out of place and, generally speaking, the more there is the less one sees. There are two kinds of glare: (1) direct—from the light source itself, and (2) reflected—from the source to the work and thence to the eyes. Recommendations are given in the text on how to combat this "saboteur". Briefly, the recommendations are to use the proper kind of equipment and to be sure it is properly placed.

Diffusion is the number two quality consideration. Shadows result where the diffusion is poor and shadows are a cause of accidents. In the words of the text, "alternate light and dark areas in strong contrast are undesirable because the eye has difficulty in adjusting itself for the two illuminations and seeing becomes tiring. For this reason, purely local lighting restricted to a small work area is unsatisfactory unless there is sufficient general illumination in the room."

Along with good quality of lighting there must also be an adequacy of light for the task involved. Today the illuminating engineer has at his command a new instrument, known as the Luckiesh-Moss Visibility Meter, by means of which he can compare the relative ease of seeing tasks and prescribe the proper quantity of light to provide good seeing conditions for any type of work. Specific recommendations are given for typical jobs encountered in the industrial work world, under the general heading of "Recommended Minimum Standards of Illumination for Industrial Interiors." The seeing tasks are classified according to their severity and where supplementary lighting is required the task is classified as A or B depending on severity. For example, group A involves those tasks requiring "(*a*) the discrimination of extremely fine detail under conditions of (*b*) extremely poor contrast, (*c*) for long periods of time. To meet these requirements, illumination levels above 100 footcandles are recommended. To provide illumination of this order, a combination of at least 20 footcandles of general lighting plus specialized supplementary lighting is necessary." Class B has to do with less severe tasks and the footcandles required are correspondingly reduced. There is also a C classification but here "source brightness is the principal factor rather than the footcandles produced at a given point".

Natural lighting is discussed and recommendations made for securing the greatest possible use of daylight facilities.

As might be expected the most detailed discussion has to do with artificial lighting since "to maintain good seeing conditions artificial lighting must be supplied when daylight fails, as on dark and cloudy days or for the areas where an insufficient quantity of daylight penetrates". General lighting systems are reviewed as to type and application and typical situations explained. Supplementary lighting takes up a section and comment is also given to windowless buildings.

The section on maintenance is most revealing. An example is cited showing how rapidly the illumination can drop off when simple mainte-

The American Recommended Practice of Industrial Lighting (A11-1942) was prepared under the sponsorship of the Illuminating Engineering Society, with the active collaboration of representatives officially designated by some 23 organizations including manufacturers, employers, employees, governmental bodies having regulatory power or influence over the field in question, and independent specialists. These include representatives of technical societies, consulting experts with no exclusive business affiliations, and educators, insurance representatives, and utilities.

Copies are available at 25 cents each.

nance requirements are neglected. For example, in this particular plant, the illumination as measured was only 49 per cent of the possible useful light. Repainting brought it up to 61 per cent. Cleaning lamps and reflectors brought it up to 81 per cent and replacing lamps with new lamps of proper voltage brought the illumination up to the 100 per cent figure.

Concluding is a section on adequate electrical wiring. This section reviews the fundamentals necessary to satisfactory performance of any lighting system: (1) economy, (2) voltage, (3) power factor, (4) flexibility, and (5) adequacy.

Not so many years ago, factory managers commonly spoke of employing so many "hands". Today, however, modern skill is now recognized as mental and not manual. Hundreds of industrial processes, when properly studied and analyzed, prove to depend almost wholly upon visual judgments. Skill today is almost entirely a matter of visual quickness and keenness and this requires lighting of the proper quantity and quality. The American Recommended Practice of Industrial Lighting is a guide to good practice. It is the standard toward which industry is striving as war makes its inexorable demands for more and more production.

British Textile Institute Works on Standard Vocabulary

As a start toward coordinating the use of technical terms and definitions in the textile industry, the British Textile Institute has appointed a committee to start work on a dictionary of textile terms which may form the basis for a national and international vocabulary.

The objectives toward which the committee is expected to work are described as follows:

(1) There should be one, and only one, approved term for every textile concept, operation, machine or article.

(2) There should be only one approved definition, specification, or description for each textile term, simple or compound.

(3) Only approved textile terms, in their approved meanings, should be used in Institute publications, examination papers, and specifications, and in Act of Parliament, Government or Municipal regulations, Patent specifications, and official documents of all kinds.

The committee plans to publish proposed terms in the *Journal* of the Textile Institute for comment and criticism in addition to referring them to associations and other organizations concerned. It is planned that two months shall be allowed for receiving comments and suggestions. The terms and definitions will then be reviewed and the results published in the *Journal* of the Textile Institute as recommendations for general use. After a period of trial in use, and necessary corrections and changes, the terms and definitions will then be published a third time and adopted as standard.

The first list of tentative definitions was published in the May issue of the *Journal*. They cover the following words used by the textile industry: Ends; Folded Yarn; Pick; Reed; Single Yarn; Twist; Wadding Thread; Warp; and Weft.

The need for standard definitions is particularly apparent at the present time, the Institute's announcement of appointment of the new committee declares. "In current textile terminology," it explains, "there are numerous examples to be found in which the same term may be used in different parts of the country or in different sections of the industry to describe different and sometimes quite dissimilar things. Conversely there are cases where the same article or process may be described by the use of several quite different terms. . . . In these circumstances confusion, misunderstandings, and difficulties of interpretation are bound to arise at any time, but never more so than at present when war-time control of industry has brought into existence large numbers of Orders, Regulations, and Specifications intended for widespread application."

Reorganized Committee Starts Work On Road and Paving Materials

ASA Sectional Committee A37 on Road and Paving Materials has been reorganized with the following officers and other members of the Executive Committee:

H. F. Clemmer—District of Columbia Engineering Department, Washington, D. C., *Chairman*
W. H. Cullimore—National Paving Brick Association, Washington, D. C., *Vice-Chairman*
C. S. Reeve—Technical Advisor, The Barrett Company, New York
F. V. Reagel—Engineer of Materials, Missouri State Highway Department, Jefferson City, Mo.
W. J. Emmons—Associate Professor of Highway Engineering, University of Michigan, Ann Arbor, Mich.

The sectional committee, which will work under the sponsorship of the American Society for Testing Materials, held its organization meeting during the Spring Meeting of the ASTM at Cleveland in March, followed by a meeting of the Executive Committee at the ASTM Annual Meeting in June at Atlantic City. At both meetings attention was given to a large number of ASTM methods of test and specifications for road and paving materials. It is expected that several of these, particularly those that have been accepted by the American Association of State Highway Officials, may be recommended by the sectional committee for approval as American Standards.

New By-Laws Assign Authority To ASA Correlating Committees

ASA Constitution and By-Laws Are Published in Single Document

CHANGES in the American Standards Association's By-Laws to recognize important developments during the past few years, which have brought to increasing prominence the industry correlating committees of the Association, were made recently in a new edition of the By-Laws just published by the American Standards Association.

The most important changes have been in Article B4, Committees and Conferences Advisory to the Standards Council. This Article declares that new projects shall be assigned by the chairman of the Standards Council to a correlating or advisory committee, to the Board of Examination, to a special committee, or to a conference, as provided in Sections B 4.2 to B 4.14 inclusive. Such assignments are subject to review by the Standards Council.

The Correlating Committees, which serve as general advisory committees to the Standards Council in their respective fields, are given authority in the new By-Laws to define and limit the scope of projects, designate sponsors for projects, approve the personnel of sectional committees, harmonize conflicts, and to follow up, expedite, and correlate work in progress in the development of standards in their fields, in addition to acting as advisory committees to the Standards Council. They are also given authority to reaffirm a standard without change. All actions of the correlating committee are subject to review by the Standards Council, however.

The new By-Laws have the effect of coordinating the regulations under which the various correlating committees of the Association have been operating. The correlating committee procedure developed gradually and each correlating committee as it was organized adopted individual by-laws for its own guidance. With greater experience and acceptance of the correlating committee methods it has now been found possible to incorporate a set of general rules into the By-Laws of the Asociation as a guide to the operations of all of the correlating committees. Only the Electrical Standards Committee still retains its individual by-laws, since it has special administrative relationships with the United States National Committee of the International Electrotechnical Commission. This committee is affiliated to the ASA.

The new ASA By-Laws are published in a single document (PR 34) with the ASA Constitution as revised in July, 1931. A second sheet (PR 34c), also just published, contains the Statement of the Basic Principles Underlying ASA Work. This statement was approved by the Board of Directors and the Standards Council in 1931.

Copies of the Constitution and By-Laws, and of the Statement of the Basic Principles, are available from the American Standards Association without charge.

ASTM Compiles Index of X-Ray Diffraction Data

A 4,000-card file index of X-ray diffraction data for use in the Hanawalt method of chemical analysis by X-ray diffraction has been published by the American Society for Testing Materials. This compilation is sponsored by a joint committee of the ASTM and the National Research Council, under the chairmanship of Professor Wheeler P. Davey, Pennsylvania State College. The data include not only Hanawalt's original published data, with his later corrections, but also additional data that have been contributed by the Aluminum Company of America, the New Jersey Zinc Company, together with data taken from the technical literature in the English language.

The cards give all pertinent data found in the sources with provision for insertion of accessory data such as crystal structure, density, etc. The index identifies the three strongest lines in the X-ray diffraction pattern of some 1,300 crystalline compounds, the chemical names and symbols of which are as given by the various sources.

The Hanawalt method has been described in the technical literature. An ASTM Committee is perfecting a tentative recommended practice for the identification of crystalline materials by the X-ray diffraction method, with early publication anticipated.

Copies of this 4,000-card index packed in finished container boxes can be obtained from the American Society for Testing Materials, 260 S. Broad St., Philadelphia, at $50 per set.

New American Standard Letter Symbols for Mechanics

by R. E. Peterson

Chairman, Subcommittee 3 on Mechanics of ASA Sectional Committee Z10

LETTER Symbols for Mechanics of Solid Bodies (Z10.3-1942) were approved by the American Standards Association in January, 1942, thus culminating an activity started in 1936. When work was undertaken at that time there was in existence an American Standard on Symbols for Mechanics, Structural Engineering, and Testing Materials, which had been approved in 1932. It was decided that in preparing a revision the field covered by the 1932 standard should be divided between two subgroups—Z10.3, Mechanics; and Z10.4, Structural Analysis—of the ASA Sectional Committee on Letter Symbols and Abbreviations (Z10)[1]. Close cooperation has been maintained between the Subcommittee on Mechanics, which prepared the new standard, and the Subcommittee on Structural Analysis, working under Professor Haertlein.

Surveyed Use of Symbols

The Subcommittee on Mechanics, in undertaking its work in 1936, decided first to make a thorough survey of symbol usage. Extensive reports were submitted by committee members. These included: "Usage in Mechanics Papers," Professor G. H. McCullough; "Usage in Mechanics Text Books," R. W. Vose and, subsequently, Professor E. R. Maurer; and "European Usage," Professor B. M. Woods. The thoroughness of these surveys is evidenced by the fact that 18 textbooks were covered by Professor Maurer's survey, while in connection with the survey of European usage the following national standards reports were obtained and systematically compared:

Great Britain—British Standards Institution BSI-560
Germany—Normenausschuss der Deutschen Industrie DIN-1304-1350
France—Association Francaise de Normalisation AFNUI
Italy—Associazione Ellectrotecnica Italiana AEI-3.1, VNI-552
Sweden —Elektriska Standardiserings Kommitten, ESK

With regard to European symbols we found valuable source material in the reports of the International Electrotechnical Commission (IEC) of which Dr. J. F. Meyer and Dr. S. A. Moss were American representatives. Both these men, incidentally, were closely connected with the ASA, Dr. Meyer as alternate member of the Electrical Standards Committee, and the United States National Committee of the IEC, and Dr. Moss as vice-chairman of ASA Committee Z10.

While it may seem unusual in 1942 to be concerned with European usage of symbols, it is the writer's belief that our past studies, inspired by Dr. Moss, were of distinct value and will take on added importance after the war is over. In passing, it may be remarked that the international situation turned out to be far better with regard to letter symbols than in practically all other respects. For example, the national standards of the five countries mentioned above and the United States, together with the recommendations of the IEC, are in complete agreement on the following symbols included in the new standards:

Acceleration of gravity	g
Angular velocity	ω
Coefficient of thermal expansion	α
Efficiency	η
Frequency	f
Mass	m
Moment	M
Modulus of elasticity	E
Period	T
Phase angle	ϕ
Pressure	p
Time	t
Wave length	λ

For most of the remaining items the agreement is almost complete. Only in a few cases are there three or more different symbols for the same concept.

The benefits of careful standardization of symbols have been pointed out frequently in these pages and elsewhere. They cannot be too greatly emphasized, however. For example, a professor at a west coast university tells us that during one hour he teaches a heat engineering course wherein the text book uses t for time and θ for temperature. During the following hour he teaches a heat transfer course for chemical engineers using a textbook with θ for time and t for temperature. We are pleased to know that he is still well and

[1] See list of Z10 subcommittees, page 190.

able to be about. Technical publications are also victims of lack of standards. For example, different papers in the same issue of the *Journal of Applied Mechanics* have used different symbols to denote the same item, and complaints have been such that, it can be stated for the benefit of those concerned, the editor now returns papers in which too much inventiveness is shown with regard to symbols. Originality should be spared by authors for ideas, and should not be wasted on symbols. Density, for example, has been denoted as ρ, λ, d, ω, δ, δ, μ in various papers, all referring to the same concept. Density is now standardized as ρ, defined as m/v=mass/volume; it is also equal to γ/g=weight per unit volume/gravitational acceleration.

One of our primary objectives was to keep our list small and easy to use; accordingly, we did not include items infrequently used or the numerous ratios which do not need separate symbols. As a general principal in all symbols standardization, subscript notations were to be excluded as far as possible. Since our viewpoint has been that the purpose of symbols is primarily to facilitate mathematical operations, we have avoided consideration of items which are not usually involved in such operations. An example would be, let us say, "Hardness," for which we do not, in accordance with the foregoing, need a letter symbol. However, for purposes of tabulation, etc., this is a good example of a case in which an abbreviation (under the jurisdiction of Subcommittee Z10.11) is in order—Bhn for Brinell Hardness Number.

In conclusion, we recognize that symbolism, like language in general, is a form of evolution, and, consequently, it is to be expected that modifications and changes will become necessary as time goes on. In this spirit the committee will at any time welcome constructive suggestions.

Representative Committee Prepared Standard Symbols For Mechanics

Members of Subcommittee Z10.3 which prepared the new standard Symbols for Mechanics of Solid Bodies (Z10.3-1942) represent industrial organizations as well as professional societies and engineering schools. They are:

R. E. Peterson, Manager, Mechanics Division, Westinghouse Research Laboratories, East Pittsburgh, Pa., *Chairman*

J. P. Den Hartog, Lieutenant Commander, Bureau of Ships, Navy Department, Washington, D. C.

L. S. Jacobsen, Professor, Mechanical Engineering, Stanford University, Palo Alto, Cal.

J. M. Lessells, Associate Professor, Mechanical Engineering Department, Massachusetts Institute of Technology, Cambridge, Mass.

G. H. MacCullough, Professor of Engineering Mechanics, Worcester Polytechnic Institute, Worcester, Mass.

J. L. Maulbetsch, Executive, Kollmorgen Optical Corporation, Brooklyn, N. Y.

E. R. Maurer, Professor Emeritus of Mechanics, University of Wisconsin, Madison, Wisc.

A. Nadai, Consulting Engineer, Research Laboratories, Westinghouse Electric and Mfg Company, East Pittsburgh, Pa.

F. B. Seely, Head, Department of Theoretical and Applied Mechanics, University of Illinois, Urbana, Ill.

Stephen Timoshenko, Professor, Theoretical and Applied Mechanics, Stanford University, Stanford, Cal.

R. W. Vose, Director of Research Chicopee Mfg Corporation, Chicopee Falls, Mass.

H. M. Westergaard, Dean, Engineering School, Harvard University, Cambridge, Mass.

B. M. Woods, Professor, Mechanical Engineering, University of California, Berkeley, Cal.

Copies of the American Standard Letter Symbols for Mechanics of Solid Bodies (Z10.3-1942), are available from the American Standards Association at 25 cents each.

Lumber Manufacturers Group Becomes New ASA Member-Body

A new Member-Body representing the lumber industry was added to the list of ASA Members during the past month, when the ASA accepted the membership of a Lumber Manufacturers Group, with the Timber Engineering Company (subsidiary of the National Lumber Manufacturers Association) as the first member of the Group. R. G. Kimbell, chief engineer, Timber Engineering Company, has been named as the Group representative on the ASA Standards Council, and B. R. Ellis, as his alternate representative.

For some time the lumber industry has cooperated with the American Standards Association, for example, in connection with the work of such committees as that on Fire Tests of Building Construction and Materials (A2), the Safety Code Committee on Grandstands (Z20), the Logging and Sawmill Safety Code (B13), and the committee on Coordination of Dimensions of Building Materials and Equipment (A62).

Other branches of the building industry are affiliated with the American Standards Association through the membership of the American Institute of Steel Construction, American Institute of Architects, American Society of Civil Engineers, Associated General Contractors of America, Gypsum Association, Insulation Board Institute, Modular Service Association, National Elevator Manufacturing Industry, Inc., National Lime Association, and the Structural Clay Products Institute.

Government Contracts With ASA For Development of War Standards

THE Federal Government has entered into a contract with the American Standards Association for the use of the facilities of the Association in the development of emergency or "war" standards for the War Production Board and the Office of Price Administration. The contract is being executed by the Office of Emergency Management on behalf of WPB and OPA. Under it the ASA is "to provide services in creating standards which include one or more of the following items, and any other assignments or projects which may be requested by the Government which come within the scope of the Association.

"*a.* Nomenclature
b. Uniformity in dimensions to provide for interchangeability of parts and supplies or the interworking of apparatus
c. Specifications for materials and products
d. Methods of test or inspection
e. Methods of rating machinery or apparatus
f. Safety standards
g. Rules for the operation of apparatus or machinery
h. Concentration upon the optimum number of types, sizes, grades, and colors."

The Simplification and Radio branches of the WPB and the Standards Division of OPA will supervise the work for the Government.

Under the contract the Association will be reimbursed by the Government for the actual cost of the work undertaken specifically for WPB and OPA. The object of the work is to further the war effort by making available to government and industry standards fitted to the present situation, so as to conserve scarce materials, to simplify production, to increase productive capacity, and to conserve man-power. As outlined in the June issue of INDUSTRIAL STANDARDIZATION, the ASA is now engaged on more than 30 of these emergency projects, and the number of such undertakings is increasing steadily. Among these are Specifications for Radio Materials and Parts, Requirements for Gas Ranges and Hot Water Heaters, Specifications for Protective Footwear, Packages for Electronic Tubes, and Screw Threads for High Temperature Bolts.

The contract is limited to $90,000 in any one fiscal year. Of this sum $60,000 is to be supplied by the War Production Board and $30,000 by the Office of Price Administration.

ASA Approves Pipe Flange And Malleable Iron Standards

Three standards for rolled steel pipe flanges and for malleable iron, widely used both by producers and consumers, were given the status of American Standard recently through approval by the American Standards Association. They are:

Specifications for Forged or Rolled Steel Pipe Flanges for General Service (G46.1-1942; ASTM A 181-37)

Malleable Iron Castings (G48.1-1942; ASTM A 47-33)

Cupola Malleable Iron (G49.1-1942; ASTM A 197-39)

The first two of these standards are referred to in a number of codes, including the ASME Boiler Code. The flange specification is a companion document to two other American Standards for flanges, the American Standard Specifications for Carbon-Steel Castings for Valves, Flanges, and Fittings for High-Temperature Service (G17.1-1942; ASTM A 95-41) and Specifications for Forged or Rolled Steel Pipe Flanges for High-Temperature Service (G17.3-1940; ASTM A 105-40).

The American Society for Testing Materials has proprietary sponsorship for these standards.

Copies of the standards can be obtained from the American Standards Association at 25 cents each.

Metal Cutting Tool Institute Joins ASA as Member-Body

The Metal Cutting Tool Institute, new Member-Body of the American Standards Association, has appointed its secretary, H. C. Hungerford, as representative on the ASA Standards Council. The Institute will thus have a voice in all decisions on approval of standards, initiation of projects, and committee memberships.

Charles M. Pond, vice-president of the Pratt & Whitney Division, Niles-Bement-Pond Company, is Mr. Hungerford's alternate representative.

Farrow Represents Photographic Group On ASA Standards Council

E. S. Farrow, Production Manager of the Eastman Kodak Company, Rochester, has been named representative of the Photographic Group on the ASA Standards Council, replacing Charles Z. Case who is entering the military service.

W. S. Vaughn, assistant production manager, replaces Mr. Farrow as alternate representative of the Group.

Underwriters' Emergency Standard Assures Performance of Fire Hose

UNDERWRITERS' Laboratories has just completed Emergency Alternate Specifications for Fire Hose to meet the requirements of a War Production Board order which drastically cut the amount of new rubber permitted for use in fire hose. The emergency specifications were adopted to conserve rubber but at the same time to maintain the necessary performance of fire hose under war conditions. The WPB order cuts the amount of new rubber from 17 pounds to 7 pounds per hundred feet for the 2½-inch hose size, with corresponding reductions in other sizes.

Underwriters' Laboratories announces that although the new hose will probably not last as long as the hose which contained the larger amount of rubber, the Emergency Alternate Specifications will assure satisfactory performance. Hose conforming to the new specifications will be inspected at the factory and will carry the Underwriters' label as evidence of compliance.

The emergency specifications provide for a bursting pressure of 600 pounds for double-jacketed hose. This is the same pressure as is required by the American Standard for Cotton Rubber-Lined Fire Hose (L3.1-1941; ASTM D 296-38). The new emergency specifications further provide for elongation, twist, warp, and kink tests under hydrostatic pressures. Provisions are also included for an oven test and accelerated aging test in an oxygen bomb, said to be important in obtaining good service.

Hose ordered by cities or industries to these specifications will be marked: 1942 UL EMERGENCY ALTERNATE 1942; and also: TESTED TO .....LB. (In this blank will be the proof test pressure of 300 pounds in the case of single-jacketed hose and 400 pounds in the case of double-jacketed hose.) Each length of hose will also bear the label of Underwriters' Laboratories.

Standards for Masonry Units Are Used in ASA Building Code Work

Recent action by the ASA Standards Council has given approval by the American Standards Association to several ASTM specifications and methods of test for manufactured masonry units. The standards so approved are:

Specifications for:

- Concrete Building Brick (ASA A75.1-1942; ASTM C55-37)
- Hollow Load-Bearing Concrete Masonry Units (ASA A79.1-1942; ASTM C90-39)
- Hollow Non-Load-Bearing Concrete Masonry Units (A80-1942; ASTM C129-39)
- Sand-Lime Building Brick (A78.1-1942; ASTM (C73-39)
- Structural Clay Floor Tile (ASA A77.1-1942; ASTM C57-39)
- Structural Clay Load-Bearing Wall Tile (ASA A74.1-1942; ASTM C34-41)
- Structural Clay Non-Loading-Bearing Wall Tile (ASA A76.1-1942; ASTM C56-41)
- Solid Load-Bearing Concrete Masonry Units (ASA A81.1-1942; ASTM C145-40)

Methods of Sampling and Testing:

- Brick (Modulus of Rupture, Compressive Strength, Absorption, Freezing and Thawing (A82.1-1942; ASTM C67-41)
- Concrete Masonry Units (A84.1-1942; ASTM C140-39)
- Structural Clay Tile (A83.1-1942; ASTM C112-36)

These standards were submitted to the American Standards Association under the Existing Standards Method and the ASTM has been granted proprietary sponsorship to cover future revisions. In connection with ASA approval of the standards, the Associated General Contractors (the only important group concerned which was not represented on ASTM Committee C15 in charge of the standards) and ASA Committee A41 on Building Code Requirements and Good Practice Recommendations for Masonry also recommended approval of the standards, all of which are used as reference documents in the proposed American Standard Building Code Requirements for Masonry on which this committee is now working.

New ASA Company Members

Several new company members have joined the American Standards Association since June 1:

Sylvania Radio Tube Division, Hygrade Sylvania Corporation, Emporium, Penn.
Rochester Telephone Corporation, Rochester, N. Y.
State Department of Labor and Industries, Olympia, Washington
Taylor-Colquitt Company, Spartanburg, S. Carolina
Universal Sanitary Manufacturing Company, New Castle, Penn.
Valve Pilot Corporation, New York
Wilcox, Crittenden & Company, Inc., Middletown, Conn.

ASA Company Members receive a certain number of free copies of standards, 20 per cent discount on all approved American Standards, copies of INDUSTRIAL STANDARDIZATION, and use of the American Standards Association Library with its files of foreign and American standards.

Standards Issued by Associations and Government

(See "ASA Standards Activities", page 210, for new American Standards and progress on ASA projects)

For the information of ASA Members, the American Standards Association gives here a list of the standards received during the past month by the ASA Library for its classified files. With the increasing amount of material being received it has been decided to eliminate from the monthly list a few of those standards which may not be so important to ASA Members, such as Federal Specifications for foods. The list below therefore, includes only those standards which the American Standards Association believes will be of greatest interest to Members in connection with their war production.

The standards listed may be consulted by ASA Members at the ASA Library, or copies may be obtained from the organization issuing the standard. Addresses of these organizations are given for your convenience.

Associations and Technical Societies

Asphalt Institute (801 Second Avenue, New York, N. Y.)

(Revised June 1942 unless otherwise marked)

Asphalt Macadam Base Specification B-7

Asphaltic Concrete Base Specification B-8

Asphalt Surface Treatment: or Retreatment of Old Bituminus Surfaces Specification S-1; of Water Bound or Traffic Bound Surfaces Specification S-2; of Loosely Bonded Surfaces Specification S-3

Emulsified Asphalt Surface Treatment of Old Bituminous or Other Paved Surfaces Specification S-4

Emulsified Asphalt Single and Double Surface Treatments of Waterbound and Rough Texture Surfaces Specification S-5

Patching, Reducing Crown, and Correcting Profile Specification B-6

Stock-Pile Asphalt Paving Mixtures for Making Quick Repairs of Bombed Surfaces Specification CP-1 March 10, 1942

Surface Courses

- Asphalt Macadam Specifications A-1
- Asphaltic Concrete Specification A-2
- Stone Filled Sheet Asphalt Specification A-3
- Sheet Asphalt Binder and Specification A-4
- Cold-Laid Asphaltic Plant-Mix Specifications CL-1, CL-2, and CL-3
- Cold-Mix—Cold-Laid Emulsified Asphalt Plant-Mix Base and Specification CL-4
- Modified Penetration Emulsified Asphalt Specification MP-1
- Asphaltic Road-Mix Specifications RM-1 and RM-2

American Society for Testing Materials (260 South Broad Street, Philadelphia, Pa.)

ASTM Emergency Standards and Specifications

Lead-Coated and Lead-Alloy-Coated Copper Wire for Electrical Purposes ES-1

Lead Coating (Hot-Dip) on Iron or Steel Hardware ES-2

Conducting Salt Spray Tests on Organic Protective Coatings, Method for ES-3

Hardness Conversion Table for Cartridge Brass (Relationship between Diamond Pyramid Rockwell, and Brinell Hardness) ES-4

Rubber Sheath Compound for Electrical Insulated Cords and Cables Where Extreme Abrasion Resistance Is Not Required ES-6

ASTM Emergency Alternate Provisions in Standard or Tentative Specifications

Open-Hearth Carbon-Steel Rails EA-A1

Steel Tires EA-A26

Steel Tie Plates EA-A67

Axle-Steel Bars for Concrete Reinforcement EA-A160

Corrosion-Resisting Shromium-Nickel Steel Sheet, Strip, and Plate EA-A167

High-Strength Corrosion-Resisting Chromium-Nickel Steel and Strip EA-A177

Heat-Treated Carbon- and Alloy-Steel Track Bolts and Nuts EA-A183

Carbon and Alloy-Steel Nuts for Bolts for High-Pressure and High-Temperature Service to 1100 F EA-A194

Carbon-Steel Castings Suitable for Fusion Welding for Service at Temperatures up to 850 F EA-A216

Alloy-Steel Castings Suitable for Fusion Welding for Service at Temperatures from 750 to 1100 F EA-A217

Hard-Drawn Steel Spring Wire EA-A227

Oil-Tempered Steel Spring Wire EA-A229

Carbon-Steel Valve Spring Quality Wire EA-A230

Corrosion-Resisting Chromium-Nickel Steel Sheet, Strip, and Plate for Fusion-Welded Unfired Pressure Vessels EA-A240

Hot-Worked High-Carbon Steel Tie Plates EA-A241

White Metal Bearing Alloys (Babbitt Metal) EA-B23

Copper-Base Alloys in Ingot Form for Sand Castings EA-B30

Soft Solder Metal EA-B32

Castings of the Alloy: Copper 88 per cent, Tin 8 per cent, Zinc 4 per cent EA-B60

Composition Brass or Ounce Metal Castings EA-B62

Die Castings: Aluminum-Base Alloy EA-B85; Zinc-Base Alloy EA-B86

Sand Castings:

- Tin-Bronze and Leaded Tin-Bronze EA-B143
- High-Leaded Tin-Bronze EA-B144
- Leaded Red Brass and Leaded Semi Red Brass EA-B145
- Leaded Yellow Brass, for General Purposes EA-B146
- Aluminum-Bronze EA-B148

Basic Sulfate White Lead EA-D82

Asphalt Roofing: Surfaced with Powdered Talc or Mica EA-D224; Surfaced with Coarse Mineral Granules EA-D249

Insulated Wire and Cable: Performance Rubber Compound EA-D353; Heat-Resisting Rubber Compound EA-D469; Ozone-Resistant Type Insulation EA-D574

Rubber Sheath Compound for Electrical Insulated Cords and Cables EA-D532
Soap:
Chip EA-D496
Powdered EA-D498
White Floating Toilet EA-D499
Built, Powdered EA-D533
Palm Oil, Solid EA-D535; Chip EA-D536
Olive Oil, Solid EA-D592; Chip EA-D630
Salt-Water EA-D593

American Welding Society (33 West 39th Street, New York, N. Y.)

Inspection of Fusion Welding, Tentative Recommended Practices April 1942 40¢

Copper and Brass Research Association (420 Lexington Avenue, New York, N. Y.)

(Revisions as of May 1942)
Flat Rolled Products, Standard Thickness Tolerances FP-1
Flat Rolled Products, Width, Straightness and Length Tolerances FP-2
Drawn Rectangular Wire, Strip and Bar, Thickness and Width Tolerances FP-6

Copper and Brass Research Assn—(con't)

Rod and Wire Diameter Tolerances ROD-1
Drawn Rod and Bar, Drawn Strip and Drawn Rectangular Wire, Length and Straightness Tolerances ROD-3
Round Seamless Tube, Wall Thickness and Diameter Tolerances TUBE-1

Society of Automotive Engineers (29 West 39th Street, New York, N. Y.)

Aeronautical Material Specifications—new and revised as of June 1, 1942
27 new specifications include aircraft engines, felt, aluminum alloy tubing and castings, carbon steel, steel sheet and strip, welded and seamless steel tubing, corrosion-resistant steel.
19 Revised specifications include leather, steel sheet and strip, seamless and welded steel tubing, corrosion- and heat-resistant steel, steel wire, steel wire screen.

Underwriters' Laboratories, Inc. (161 Sixth Avenue, New York, N. Y.)

Attachment Plugs and Receptacles 3rd ed June 1942

United States Government

National Bureau of Standards (Washington, D. C.)

(Copies Available from Superintendent of Documents, Government Printing Office, Washington, D. C.)

Building Construction, Field Inspectors' Check List Report BMS81
Building Materials and Structures
Water Permeability of Walls Built of Masonry Units Report BMS82
Survey of Roofing Materials in the South Central States Report BMS84

Commercial Standards

Approved by Industry

Plywood (Hardwood and Eastern Red Cedar) 2nd ed CS35-42

In Print

Automatic Mechanical-Draft Oil Burners Designed for Domestic Installations 2nd ed CS75-42
Flue-Connected Oil-Burning Space Heaters Equipped with Vaporizing Pot Type Burners CS101-43
Gas Floor Furnaces—Gravity Circulating Type CS99-42
Multiple-Coated Porcelain Enameled Steel Utensils CS100-42

Simplified Practice Recommendations

Circulated to Industry
Salt Packages R70
Approved by Industry
Cotton Jersey Cloth and Tubing for Work Gloves R194-42
Files and Rasps (Revision of R6-40) R6-42
Packages for Shortening, Salad Oil, and Cooking Oil R193-42
Structural Insulating Board (Revision of R179-41) R179-42
Wire Diameters for Mineral Aggregate Production Screens (Revision of R147-33) R147-42
Reaffirmed without Change by Standing Committee
Ash Handles R76-40
Vitrified Paving Brick R1-40
Approved by WPB after Development in Collaboration with the Industry
Dental Excavating Burs R195-42
Revised
Steel Reinforcing Bars (Revision of R26-30) R26-42
In Print (Copies available from Superintendent of Documents, Government Printing Office, Washington, D. C.)
Bell Bottom Screw Jacks R97-42
Cotton Canton Flannels for Work Gloves R186-42

Federal Specifications Executive Committee (U. S. Treasury Department, Washington, D. C.)

Federal Specifications

(Copies Available from Superintendent of Documents, Government Printing Office, Washington, D. C.)

The date after the title of the specification indicates when it becomes effective.

Aggregate; (for) portland-cement-concrete (Amendment 1) SS-A-281a Sept 1, 1942
Aluminum-Alloy (AL-3) (aluminum-manganese); plates and sheets (superseding QQ-A-359) QQ-A-359a Sept 15, 1942
Bronze; castings (Amendment 1) QQ-B-691a Sept 15, 1942
Brushes; hair military (superseding H-B-321) H-B321a Sept 30, 1942
Carpets and Rugs; Axminster (superseding DDD-C-51, 1/9/34) DDD-C-51a Sept 15, 1942
Catsup; tomato (Amendment 2) JJJ-C-91a Sept 15, 1942
Clips; paper, binder (new) FF-C-431 Oct 1, 1942
Cloth; shade (Amendment 3) CCC-C-521a Sept 1, 1942
Compound, Calking; plastic (for masonry and other structures) (new) TT-C-598 Oct 15, 1942
Conduit and Fittings; asbestos-cement (for) electrical purposes (new) W-C-571 Sept 15, 1942
Correction-Compound; stencil (new) TT-C-621 Sept 15, 1942
Cushion; carpet and rug, hair-felt (Amendment 1) C-C-811 Sept. 15, 1942
Dictionaries; English (new) G-D-331 Sept 15, 1942

Fasteners; paper, flexible, metallic (not for use with binder covers having removable slide attachments) (new) FF-F-111 Mar 9, 1942
Hammers, Mauls, and Sledges (new) GGG-H-86 Aug 15, 1942
Hash; corned-beef, canned (superseding PP-H-91, 1/5/32) PP-H-91a Sept 15, 1942
Hoes, Mattocks, and Picks (superseding GGG-H-506) GGG-H-506a Sept 1, 1942
Iron and Steel; sheet, zinc-coated (galvanized) (superseding part of QQ-I-696) QQ-I-716 Sept 1, 1942
Lacquer; spraying, clear and pigmented (general use) (new) TT-L-58 Oct 15, 1942
Lamps; electric, incandescent, large, tungsten-filament (superseding W-L-101d) W-L-101e Sept 15, 1942
Lamps; electric, incandescent, miniature, tungsten-filament (1943 Supplement) W-L-111b Sept 1, 1942
Leather; bag (Amendment 1) KK-L-151a Oct 1, 1942
Leather; case (Amendment 1) KK-L-166 Oct 1, 1942
Pads; heating, chemical (new) O-P-46 Sept 15, 1942
Paints; lead-zinc-base, ready-mixed and semipaste, white and tinted (Amendment 1) TT-P-36a Sept 15, 1942
Paper; tracing (superseding UU-P-561b) UU-P-561c Sept 15, 1942
Pillowcases; cotton, bleached (Amendment 2, superseding Amendment 1, 2/17/41) DDD-P-351 Sept 15, 1942
Pipe; clay, sewer (superseding SS-P-361 SS-P-361a Oct 15, 1942
Pipe-Fittings; brass or bronze (threaded), 250-pound (superseding WW-P- 461, 2/2/32 WW-P-461a Sept 15, 1942
Polish; automobile, liquid (new) P-P-546 Sept 15, 1942
Polish; furniture, liquid (new) P-P-552 Sept 15, 1942
Ranges; electric, domestic, cabinet-type (new) W-R-101 Sept 15, 1942
Sealer, Floor; lacquer-type (for oiled wood floors) (new) TT-S-171 Sept 15, 1942
Sieves; standard, testing (superseding RR-S-366) RR-S-366a Oct 15, 1942
Soap, Liquid and Paste; (for) automobile, floor, and general cleaning (Amendment 1) P-S-598 Sept 15, 1942
Tallow (new) C-T-91 Oct 15, 1942
Tar; pine, technical-grade (new) JJJ-T-121 Sept 15, 1942
Wax; Carnauba (new) JJJ-W-141 Sept 15, 1942
Wax, Floor; water-emulsion (superseding P-W-151, 4/29/37 P-W-151a Sept 15, 1942

Emergency Alternate Federal Specifications (Prepared in collaboration with the War Production Board)

Aluminum-Base-Alloys; sand-castings (superseding E-QQ-A-601, 10/15/41) E-QQ-A-601 June 10, 1942
Aprons; rubber, surgeons' E-ZZ-A-611 June 12, 1942
Atomizers; hand E-GG-A-761 June 23, 1942
Bags; paper, kraft, grocers' (superseding E-UU-B-36, 5/12/42) E-UU-B-36 June 25, 1942
Bars; reinforcement, (for) concrete E-QQ-B-71a June 2, 1942
Braces; ratchet (superseding E-GGG-B-671a, 4/9/42) E-GGG-B-671a May 12, 1942
Brushes:
beaker, burette, cylinder and test-tube E-H-B-126 May 20, 1942
calcimine (superseding E-H-B-141, 5/19/42) E-H-B-141 June 10, 1942
mucilage and paste E-H-B-401 May 8, 1942
paint; metal-bound, flat (utility-wall) (superseding E-H-B-436, 3/6/42) E-H-B-436 May 29, 1942
roof; knotted-style, three-knots E-H-B-471 May 29, 1942
sash-tool E-H-B-491a May 12, 1942
scrubbing, clothes E-H-B-521 May 29, 1942
Brushes (con't)
varnish, flat (double X thickness) (superseding E-H-B-701, 3/6/42) May 29, 1942
varnish, flat (triple X thickness) (superseding E-H-B-706, 3/6/42) May 29, 1942
whitewash E-H-B-731 May 8, 1942
Cable and Wire; rubber-insulated, (for) other than building purposes, superaging-Grade (0 to 8,000 volt service) E-J-C-121 May 23, 1942
Cans; oil (kerosene) (superseding E-RR-C-85, 8/16/41) E-RR-C-85 June 10, 1942
Cardboard; bristol, manila and railroad E-UU-C-201 June 30, 1942
Cements, Hydraulic; general specifications (methods for sampling, inspection, and testing) E-SS-C-158a June 5, 1942
Cement; Portland E-SS-C-191b; Portland, high-early-strength E-SS-C-201a; Portland, moderate-heat-of-hardening E-SS-C-206a June 5, 1942
Clips; paper, wire (superseding E-FF-C-436, 4/9/42) E-FF-C-436 May 20, 1942
Conduit; steel, rigid, enameled E-WW-C-571; steel, rigid, zinc-coated (superseding E-WW-C-581a, 6/30/41) E-WW-C-581a May 14, 1942
Coolers; drinking-water, electric (superseding E-OO-C-566, 3/26/1942) E-OO-C-566 June 25, 1942
Cork; compressed (corkboard) (for thermal insulation) E-HH-C-561b May 8, 1942
Couplings, Hose:
cotton (rubber-lined) and linen (unlined) (superseding E-WW-C-621a, 12/31/41) E-WW-C-621a May 8, 1942
garden and water E-WW-C-623a May 8, 1942
oil-suction and discharge E-WW-C-626 May 8, 1942
water-suction (superseding E-WW-C-646, 12/31/41) E-WW-C-646 May 8, 1942
Cups, Sputum; paper E-UU-C-821a June 23, 1942
Drills, Electric; portable (exclusive of high-frequency types) E-W-D-661 June 30, 1942
Drums; steel, type 5 (for inflammable or poisonous liquids) E-RR-D-726a June 30, 1942
Erasers; rubber and rubber substitute E-ZZ-E-661a June 10, 1942
Fencing; chain-link or welded (including gates, posts, wire, etc.) (superseding E-RR-F-191, 3/19/42) E-RR-F-191 June 10, 1942
Fencing; wire (barbed, netting and woven), black and galvanized (superseding E-RR-F-221, 12/12/41) E-RR-F-221 May 12, 1942
Folders; file (calendered), vertical (superseding E-UU-F-571b, 6/2/42) E-UU-F-571b June 30, 1942
Hose, Fire; cotton, rubber-lined (superseding E-ZZ-H-451a, 2/24/42) E-ZZ-H-451a June 23, 1942
Hose, Gas; (acetylene, air, hydrogen, and oxygen) E-ZZ-H-461a June 17, 1942
Hose; suction, water, smooth-bore E-ZZ-H-561b May 12, 1942
Insulation:
Glass-Fiber; semi-rigid E-HH-I-556 June 10, 1942
Vegetable or Wood-Fiber; blanket, felt, and loose-fill E-HH-I-571 May 8, 1942
Vermiculcite; block and pipe-covering (molded) E-HH-I-578 June 10, 1942
Laundry Appliances (superseding E-OO-L-13lb, 12/20/41) E-OO-L-13lb May 20, 1942
Leather:
sole (cut-outer and top-lift), vegetable-tanned, factory E-KK-L-261b; upholstery E-KK-L-291 June 2, 1942
Magnesia; block, cement, and pipe-covering (molded) E-HH-M-61 June 10, 1942
Mattresses; cotton (felted) (superseding E-V-M-81a, 4/11/42) E-V-M-81a June 10, 1942
Mineral Wool Impregnated; blanket, block and pipe covering (molded) for low temperatures E-HH-M-371 June 10, 1942
Packing; asbestos, metallic-cloth, sheet (superseding E-HH-P-31, 4/21/42) E-HH-P-31 June 5, 1942

Padlocks E-FF-P-101a May 23, 1942
Paints; ready-mixed and semipaste, olive-drab (superseding E-TT-P-81, 1/6/42) E-TT-P-81 June 25, 1942
Panelboards; equipped with automatic circuit-breakers (superseding E-W-P-131a, 2/27/42) E-W-P-131a May 23, 1942
Pans, Fry; corrosion-resisting-steel-clad (3-ply) E-RR-P-86 May 8, 1942
Paper: General Specifications (superseding E-UU-P-31a, 1/30/42) E-UU-P-31a June 25, 1942
Blueprint (sensitized and unsensitized) E-UU-P-79a May 26, 1942
Bond; white and colored E-UU-P-121c June 25, 1942
Chart; 100% rag, lithograph-finish, white E-UU-P-171 June 25, 1942
Kraft, wrapping (superseding E-UU-P-268a, 2/16/42) E-UU-P-268a May 26, 1942
Ledger E-UU-P-288 June 25, 1942
Legal-cap, ruled E-UU-P-301 June 25, 1942
Manifold E-UU-P-328a June 25, 1942
Printing, book, machine-finish E-UU-P-465 June 25, 1942
Writing (superseding E-UU-P-641, 4/3/42) E-UU-P-641 June 25, 1942
Pipe-Covering; cork, molded E-HH-P-381 May 8, 1942
Pipe-Covering and Cement; mineral or rock wool E-HH-P-386a June 10, 1942
Planes (superseding E-GGG-P-436, 4/9/42) E-GGG-P-436 May 12, 1942
Rope; wire (superseding E-RR-R-571, 3/9/42) E-RR-R-571 June 2, 1942
Screw-Drivers (superseding E-GGG-S-121a, 4/9/42) E-GGG-S-121a May 8, 1942
Sheeting; rubber E-ZZ-S-311a May 29, 1942
Steel, Structural: (for bridges) E-QQ-S-711a; (for buildings) E-QQ-S-721a May 20, 1942
Tableware:
Glass E-DD-T-101a June 17, 1942
Silver-Plated (superseding E-RR-T-51a, 4/11/42) E-RR-T-51a June 10, 1942
Steel (chromium, nickel, silver, and tin)-Plated E-RR-T-56 May 20, 1942
Tags; shipping and stock (superseding E-UU-T-81b, 3/6/42) E-UU-T-81b May 14, 1942
Tape:
Friction (superseding E-HH-T-101a, 1/30/42) E-HH-T-101a June 23, 1942
Gummed; mending, reinforcing, and securing E-UU-T-101b June 23, 1942
Paper, gummed (kraft) (superseding E-UU-T-111, 1/28/42) E-UU-T-111 May 20, 1942
Tape (con't)
Rubber, insulating (superseding E-HH-T-111a. 1/14/42) E-HH-T-111a June 23, 1942
Thread; linen (superseding E-V-T-291a, 2/9/42) E-V-T-291a June 30, 1942
Towels; Turkish E-DDD-T-551 May 14, 1942
Tubing:
Electrical, metallic (superseding E-WW-T-806a, 6/30/41) E-WW-T-806a May 14, 1942
Rubber (superseding E-ZZ-T-831b, 3/31/42) E-ZZ-T-831b June 17, 1942
Ultramarine-Blue; dry, paste-in-japan, paste-in-oil (superseding E-TT-U-451, 4/25/42) E-TT-U-451a May 23, 1942
Wire, Steel: market (superseding E-QQ-W-432, 7/23/41) E-QQ-W-432; Zinc-coated (for wire-bound-boxes) (superseding E-QQ-W-446, 6/20/41) E-QQ-W-446 June 23, 1942
Wood-Preservative:
Celcure (acid-cupric-chromate) E-TT-W-546 May 29, 1942
Chromated-Zinc-Chloride E-TT-W-551 May 29, 1942
Recommended Treating Practice (superseding E-TT-W-571b, 1/22/42) E-TT-W-571b May 29, 1942
Wolman Salt (tanalith) E-TT-W-573 May 29, 1942

(List of Emergency Alternate Federal Specifications as of June 10, 1942 is also available.)

U. S. Army and Navy

List of Material and Process Specifications for use in the maintenance and construction of aircraft (Lists Army Air Force, Army-Navy Aeronautical, U.S. Army and Federal Specifications.) May be obtained for use in connection with Army Air Force contracts and for bidding purposes upon request to the Commanding General, AAF Materiel Center, Wright Field, Dayton, Ohio. (superseding issue of May 10, 1942) Bulletin No. 23, June 10, 1942.

Monthly Report on Changes in U.S. Army Specifications, Federal Specifications, Commercial Standards, Simplified Practice Recommendations compiled by the Standards Branch, Resources Division, Headquarters, Services of Supply, June 1942.

Index of U.S. Army and Federal Specifications used by the War Department January 1942 (One copy only of this publication is on file in the ASA Library and may be consulted there. Copies available from Superintendent of Documents, Washington, D. C., 30¢)

New Book Compares Requirements Of British, American Standards

Non-ferrous metals standards are summarized in new British publication

Tables summarizing the requirements of both American and British specifications for non-ferrous metals have just been published by the British Standards Institution, specifically to help British companies to determine the extent to which they can work to American specifications. It was originally hoped, the BSI explains, that "Tables of Equivalency" could also be published that would indicate which American specifications provide material corresponding to that provided in relevant British Standards. The basis on which the specifications have been drawn up is not identical in the two countries, however, so that in many cases it has not been possible to prepare such tables of equivalents.

The 35 tables given in the new book summarize the composition limits and approximate ultimate tensile stress for each type of material and list the number of the British or American standard in which the requirements are found.

The summary was approved by the Non-Ferrous Metallurgy Industry Committee and endorsed by the chairman of the Engineering Divisional Council of Great Britain. It was published by the British Standards Institution under the authority of the General Council.

Copies of the book, British Standard 1007:1942, may be ordered through the American Standards Association Library.

New Foreign Standards Received by ASA Library

The following new and revised standards have just been received by the American Standards Association, and may be borrowed by ASA Members or ordered from the ASA Library. They are published in the language of the country in which they were developed.

Australia

Anti-Scatter Protection of Glass (Interim report) MP.9-1942

Boilers and Unfired Pressure Vessels in Corrosion-Resisting Steel (SAA Code) CB.10-1942

Brazil

Normas Brasileiras (Brazilian Standards)—Publication containing 27 standards approved by the national standardization body of Brazil from 1927 through October 1941

Canada

Cooking and Liquid-Heating Appliances, Construction and Test of (Domestic and Commercial Types)—Canadian Electrical Code, Part II 1st ed C22.2—No. 64-1942 75¢

Great Britain

Complete list of British standards as of April 1, 1942 Single copy, free (Supply limited)

Aircraft Materials and Components—Spline Shafts and Holes A.20; Flexible Steel Wire Rope CF(AC)9705 (Amendment to BS 5 W2)

Fastness to Light of Colored Textile Materials, Methods of Test BS 1006—Part I-1942

Non-Ferrous Metals, Summary of British and American Specifications BS 1007-1942

Red Lead Ready-Mixed Paints BS 1011-1942

Revised British Standard

Structural Steel for the Pressure Parts of Marine Boilers (Superseding BS 14-1907) BS 14-1942

Amendments to British Standards

Derrick Cranes (Power Driven) CF(ME)9708; (Hand Operated) CF(ME)9706; (Amendments to BS 327—Part 1-1934 and Part 2-1933)

Malleable Iron Castings, White Heart CF(IS)9310; Black Heart CF(IS)9311; (Amendments to BS 309- and 310-1927)

Plain Limit Gauges, Tolerances for CF(ME)9397 (Amendment to BS 969-1941)

Steel Wire Ropes for Colliery Haulage Purposes, Round Strand and Flattened Strand CF(ME)9651 (Amendment to BS 330-1941)

British War Emergency Standards

Check Sizes BS 1009-1942

Bib, Pillar, Globe and Stop Taps from ¼- to 2-inch size and Ball Taps BS 1010-1942

Supplements and Amendments to British War Emergency Standards

Lead Pipes for Other than Chemical Purposes CF(B) 9878 (Amendment to BS 602-1939)

Manila Ropes for General Purposes CF(ME)9641 (Amendment to BS 431-1940)

Paints: Ready-Mixed, Priming, Undercoating, Finishing Coat, Oil Gloss CF(C)9623 (Amendment to BS 929-1940)

Special and Alloy Steels, Memorandum to Consumers and Producers regarding the Standardization of CF(IS) 9656 (Supplement to BS 970-1941)

BS Air-Raid Precaution Specifications

Fabric-Bitumen Emulsion Treatment for Roof Glazing BS/ARP 48 1st revision

Rot-Proofed Jute, Hessian Sand Bags CG(ARP)52 (Amendment to BS/ARP 57)

Stirrup Pump, Drawings of CF(ARP)9812 (Supplement to BS/ARP 33)

Traffic Paints CF(ARP)9977 (Amendment to BS/ARP 38)

BS Board of Trade Specifications

Women's Dresses BS/BOT 1-1942

Women's Underwear BS/BOT 2-1942

Galvanized Hollow-Ware, including Ware with Japanned or Alternative Finish, Schedule of BS/BOT 11-1942

Enamelled or Tinned Domestic Hollow-Ware, Stamped or Wrought Steel, Schedule of BS/BOT 12-1942

Cast-Iron Hollow-Ware, Schedule of BS/BOT 13-1942

BS and BWES Drafts

Moulded Insulating Materials for Accessories for General Electrical Installations for Use on Circuits up to 250 volts AC and Operating at Working Temperatures not exceeding 110 C (Revision of BS 488) CG(EL)528

Commercial Invoices, War Emergency Spec for (Superseding CG(PAC)40) CG(C)268

Waterpaints and Distempers for Indoor Use, War Emergency Spec for CG(C)255

Wartime Painting Procedure for Buildings CG(C)430

New Zealand

War Emergency Standard

Ready-Mixed Paint for Finishing Coats for Woodwork (White and Light Tints), Specification for NZSS E32

Switzerland

Gummischlauchleiter, Bewegliche Mehrfachleiter, Gummilbleikabel VSM 23871-85 U Bl. 1 & 2

Zeichnungen: Werkzeichnung, Beispiele VSM 10340a S.P.1-5

Rohrleitungen

- Leichte Gewindeflansche, rund mit Ansatz, LC1: ND1, NW 10 bis 150 VSM 18587; ND2.5, NW 10 bis 150 VSM 18588
- Leichte Gewindeflansche, oval, mit Ansatz, LC1a: ND1, NW 10 bis 100 VSM 18590; ND2.5, NW 10 bis 100 VSM 18591
- Leichte Flansche, rund, ohne Ansatz, LD1, für Lötung oder Schweissung: ND1, NW 10 bis 200 VSM 18593; ND2.5, NW 10 bis 200 VSM 18594
- Leichte Flansche, ohne Ansatz, LG, für Lichtbogenschweissung: ND1, NW 50 bis 1000 VSM 18596; ND2.5, NW 50 bis 1000 VSM 18597
- Leichte, lose Flansche, LU, für Bördelrohre: ND1, NW 50 bis 1000 VSM 18599

Armaturen: Hahnen, Ventile, usw; Erläuterungen VSM 19400 S.P.1-8

Hahnen VSM 19405-19413

Kopfstück-Ventile VSM 19420-19424

Aufsatz-Ventile VSM 19430-19437

Stahlrohre

- Nahtlos, warm gewalzt, Leitungs- und Konstruktionsrohre, Uebersicht VSM 11500
- Nahtlos, warm gewalzt, Rohre ohne Gütevorschriften (Handelsgüte), Klasse B, Stahl St. 00.29 VSM 11510a
- Gewinderohre, gewöhnlich, Klasse A, ohne Gütevorschriften VSM 11520a
- Gewinderohre, verstärkt, Klasse A, ohne Gütevorschriften VSM 11521a

OPA Requires Grade-Marking On All Beef and Veal

Mandatory quality grading, based on a modification of the standards of the Agricultural Marketing Administration, is the new basis for price control of beef and veal. A special regulation (Maximum Price Regulation 169), effective July 15, changes the previous basis for pricing by packers and wholesalers, and requires that all carcasses and wholesale cuts shall be graded and marked according to the OPA grades AA, A, or C. Prices to the consumer remain the same as those established under the General Maximum Price Regulation.

The OPA modification of the Agricultural Marketing Administration's grades combine the AMA grades "prime" and "choice" into a new grade "AA". The AMA grade "good" becomes the OPA grade "A" and the AMA "commercial" grade corresponds to OPA grade "C".

The "AA" designation has been criticized by many sources as confusing to the buyer who may believe that Grade "A" is the top grade. Usually, however, OPA explains, there is only a small amount of the top "AA" grade meat available. The new Grade "A" which corresponds to the AMA grade "Good" will cover most of the better grades of beef and veal purchased by housewives, the Office of Price Administration declares.

In addition to the new OPA alphabetical grades, it is expected that many packers and wholesalers will continue to mark their meats with the original AMA Government grade as well as the packers' own grade names. Last year, it is reported, nearly 800,000,000 pounds of fresh and frozen beef were Government-graded.

Meat experts of the Consumer Division of the OPA say that few housewives are trained to judge the quality of meat by appearance alone, and that price is rarely an index to meat flavor or tenderness. They believe that the new grading requirement is a guarantee to the housewife that she will get the quality she pays for.

According to Leon Henderson, the new regulation linking price to quality standards was made necessary because OPA investigation revealed that certain wholesalers and packers had ceiling prices on beef and veal which exceeded the actual prices that most retailers had paid during March and on which they in turn had based their ceiling prices. "This new regulation," he said, "will relieve an inordinate squeeze against the retail price ceilings on these commodities."

ASA Approves New Edition Of Building Exits Code

The 1942 edition of the Building Exits Code (A9.1-1942) has just been approved by the American Standards Association and published by the National Fire Protection Association, sponsor for the work. The new edition incorporates only minor editorial changes to coordinate various sections and to bring them up-to-date. The principal change is in the provision for independent lighting, which now defines specifically the types of buildings which should be provided with emergency lighting to assure continued illumination of all exitways in case the principal lighting of the building should fail.

The Building Exits Code is intended to protect persons, not property, against fire hazards by specifying the number, size, and position of exit facilities, as well as construction requirements, needed to empty buildings promptly and safely. Its provisions are based on studies of actual fires in which lives have been lost, and the principles on which it is based have been checked by the Building Exits Committee with studies of actual fire experience. It has been found that the buildings in which the major losses of life by fire have occurred have fallen far short of the standards of the Code, the committee reports.

The Code includes sections on schools, department stores, factories, hospitals and institutions, places of public assembly, and hotels and apartment houses. It is planned that eventually other sections will be added to cover all the recognized classes of occupancy, the committee explains.

Copies of the Building Exits Code (A9.1-1942) are available at $1.00 each.

Fairchild Named as Member Of ASA Standards Council

I. J. Fairchild, chief of the Division of Trade Standards, National Bureau of Standards, has been named by the U. S. Department of Commerce as its representative on the ASA Standards Council. Mr. Fairchild who has in the past served as the Department's alternate representative, will complete the unexpired term of James Swan, formerly member of the Council representing the Department.

Mr. Fairchild has been closely affiliated with the work of the ASA through his position with the National Bureau or Standards, as a member of several ASA sectional committtees, and as a member of the ASA Mechanical Standards Committee.

Price Order Arouses Discussion On Need of Defining Quality

OPA Order on Women's Outerwear is seen as causing hidden price increases through quality deterioration; standards suggested as only means of pegging price to quality to prevent "hidden inflation"

THE revision of OPA order No. 153 governing the method of pricing fall and winter outerwear garments for women and children, issued June 10, which provides a method of establishing price ceilings radically different from that in the original order, has led to widespread discussion of the need for defining quality as a basis for price orders.

The original price freezing order fixed ceiling prices on cloth-cut garments, but stipulated that the maximum price charged must be for a garment of "substantially equal workmanship and quality produced during the base period of July 1 through September 30, 1941." Manufacturers strenuously objected to this original order, claiming that if they were forced to absorb increases of from 10 to 25 per cent in cost of commodities and labor they would not be able to continue in production. The new order was designed to meet this criticism.

Comments by consumer groups, by the business press, and by the trade itself, regard the new order as causing the first break in the OPA price ceilings through a failure to tie prices to quality standards. The order, in effect, critics declare, allows hidden price increases by not only permitting, but forcing quality deterioration.

Permits Markup

The new order, which omits the "equal workmanship and quality" clause, permits manufacturers, wholesalers, and retailers, to charge this season's costs plus the same markup used last year, but freezes the price lines which a seller may handle to his prices during his last selling season. Today's higher labor and higher material costs will, therefore, it is asserted, force a price increase which is expected to raise a lower price line to the next higher price line. In other words, say the critics, the net result of the new order will be to pass on to the consumer a 10 to 25 per cent rise, but to do it by charging her the same price she paid last year, while giving her a poorer garment. *Business Week* calls this "hidden inflation."

There are varying reasons ascribed to the present OPA action: First, the pressure of labor groups to include their increased wage rates; second, the pressure of manufacturers to add their increased material cost into fall and winter prices; third, the desire of wholesalers and retailers to keep their profit margins intact; and fourth, the necessity for speedy action to permit manufacturers to get into production on fall and winter outergarments.

Earl W. Elhart, editor of *Women's Wear Daily*, headed his personal comment column of July 12th with "Quality Takes a Licking." He said in part: "Quality degradation has in effect been made mandatory if the manufacturer is to live under his ceiling." The *Daily News Record* commented "That the March ceiling is breached by permitting a decline in quality at unchanged prices is the consensus of the trade." *Business Week*, after analyzing the complicated order, boils it down: "No price lines, category by category, may exceed the highest ranges of last year. Yet provision is made for wage and raw material increases. Ergo, manufacturers and distributors have no alternative but to deal in top-priced merchandise while cutting on quality and workmanship."

"If there is to be any real control of prices there must be a linking of price and quality," said *Women's Wear Daily*. "Price without a quality definition is meaningless. Unless some sort of quality standards are set up we shall continue to have inflation through the subterranean channel of quality degradation."

The criticism treats the revised order as an exception to the practice and policy hitherto followed by OPA.

Some of the critics contrast it with orders for certain other commodities in which prices have been pegged to quality by means of standards. One example cited is Price Regulation No. 169 for beef and veal, which not only bases the price ceilings on quality standards, but also requires grade labeling of the meat (see article page 204). Another is the order for sheets and sheeting, in which prices are pegged to grades developed through an ASA committee.

What Henderson Says

In this connection it may be noted that in an article entitled "Price Control Requires Standards," in the June issue of INDUSTRIAL STANDARDIZATION, Leon Henderson, Price Administrator, said: "OPA is fully cognizant of the fact that a price ceiling alone will not necessarily have the effect of preventing 'real' price spiraling in all cases. If, for example, a ceiling price were set

on a commodity and no attempt were made to define that commodity, variations and substitutions could be instituted which would decrease ultimate serviceability through quality deterioration. This is, in essence, just as much of a price rise to a consumer as an actual dollar and cents rise in price. To the ultimate consumer real cost is represented not merely by the purchase price but is made up of at least two factors which might be expressed as the ratio between monetary cost and the length of useful service. It is the function of standards to keep this ratio as low as possible."

New ASA War Project Covers Safety Shoes

SAFETY shoes are to be covered in a new War Emergency Project just approved by H. S. Osborne, chairman of the ASA Standards Council. Work by the ASA to coordinate requirements for safety shoes, thus eliminating waste in the manufacture, distribution, and use of this type of shoe, was requested by the Office of Price Administration and the War Production Board. The War Production Board suggested as the scope of the project the following:

(1) To develop classifications of safety shoes by functional uses, together with specifications for each, using materials now available.

(2) To use present recognized test methods and procedures in arriving at standards, rather than develop new or additional impact and bending tests, etc.

(3) To eliminate types and varieties and styles of safety shoes, which are not vitally needed for industrial use during this emergency period.

Safety shoes are a necessity for workers engaged in war production of various types, the OPA request for the project points out. The present multiplicity of requirements for safety shoes intended to fill the same need results in difficulties and waste and also impedes the production and price control work of WPB and OPA, it declared. The project has a direct bearing on the war effort in its relation to conservation of leather and manufacturing capacity as well as to provide suitable and satisfactory workmen's shoes, the OPA stated.

A War Standards Committee to work on the standard has been appointed by the ASA as follows:

E. H. Granniss, National Conservation Bureau, *Chairman*
George Dick, Melville Shoe Corporation
R. C. Erb, J. F. McElwain Company
J. H. Gimblett, International Shoe Company
H. J. Griffith, Jones & Laughlin Steel Company
E. B. Landry, U. S. Navy Department
H. L. Miner, E. I. duPont de Nemours
Captain W. J. Niederauer, U. S. War Department
G. E. Sanford, General Electric Company
A. A. Williams, Safety First Shoe Company

In addition, M. L. Chandross, Consumer Division, OPA; H. C. Mesch, Safety Equipment Branch, WPB; and A. J. Spring, Textile Branch, WPB, are meeting with the committee and participating in its discussions. The committee represents safety shoe manufacturers, industry at large, insurance, the Navy Department, and the War Department.

Australia Needs Data On American Standards

"Up-to-date information regarding American Standards is extremely important to us at present. Only this afternoon I had a conference with an Officer of your Air Force, seeking information regarding the relation between American and Australian specifications. With so much American aircraft and equipment coming to Australia there will be an increasing need for the fullest possible information regarding the respective standards. I therefore greatly appreciate your keeping me fully informed regarding any new American Standards."

—W. Rayner Hebblewhite,
Chief Executive Officer,
Standards Association of Australia.

Atlantic City Papers Drop Use of Periods

The Press-Union newspapers of Atlantic City, N. J., announce that they will hereafter drop all periods in abbreviations in order to save time and space. This is the style recommended in the American Standard Abbreviations for Scientific and Engineering Terms (Z10.1-1941), which states that, in general, periods should be omitted from abbreviations except when the abbreviation might be confused with a complete word. The abbreviation for inch, therefore, is spelled with a period "in.", whereas the abbreviation for foot "ft" is spelled without a period.

British Develop Clothing Standards As Result of Rationing Program

FOUR War Emergency Standards issued recently by the British Standards Institution carry the work of the BSI into a field which until now has scarcely been touched by standardization. These standards, which give sizes and minimum requirements for women's dresses, underwear, blouses, and requirements for boots and shoes, were prepared by the BSI on behalf of the Board of Trade as a result of the rationing of clothing in Great Britain. The purpose in preparing the standards, the BSI explains, is to provide good coupon value for the garments. Through Statutory Rules and Orders the Board of Trade has authority to make the standards obligatory, and has already done so in the case of women's underwear and blouses.

Wall Charts Help Cutters

In addition to the standards themselves, wall charts prepared by the BSI for display in design and cutting departments will provide easy and quick reference to the standard requirements.

Standard BS/Bot 1, Women's Dresses, applies to woven cotton, rayon, and woolen dresses. Methods of manufacture, including minimum allowance for seams, minimum number of stitches per inch and per button, and type of seam to be used, are specified in addition to the series of standard sizes. A size tab indicating the size specification to which the garment conforms must be attached to the dress, the standard provides.

Greatest interest in this new standard will center in the series of sizes, which are designated from A through M for the average figure; with two additional series based upon the body measurements of the woman whose bust and waist measurements are smaller in comparison with her hip measurement than the average, and on the body measurements of the woman whose bust and waist measurements are larger in comparison with her hip measurement than the average. Bust, waist, and hip measurements are used to determine the size category into which the garment falls, the sizes progressing by two-inch increments in the average series.

How the Sizes Run

Size A, for example, has a 32 to 34 in. hip with a 29 to 31 in. bust and a 22 to 24 in. waist; and size B has a 34 to 36 in. hip, a 31 to 33 in. bust, and a 24 to 26 in. waist.

Size A1, however, although the hip measurement remains the same, has less than a 29 in. bust, and less than a 22 in. waist; whereas size B1 has a 34 to 36 in. hip, the same as size B, but has a 29 to 31 in. bust and a 22 to 24 in. waist.

A2, on the other hand, although having the same hip size as size A and size A1 has a 31 to 32 in. bust and a 24 to 26 in. waist.

Charts for each series of sizes give more detailed measurements, including cross back, cross chest, arm hole circumference, inside sleeve length, forearm girth, and guide measurements for center shoulder seam to bust, center back neck to waist, and waist to hip measurements.

Sizes Are for Finished Garments

The sizes indicated are minimum finished garment measurements, excluding seam allowance.

The standard on Women's Underwear applies to rayon garments, and specifies minimum measurements and maximum yardages for each type of garment, as well as size designations. Types of seams to be used, and seam allowances, are specified and it is provided that the minimum number of stitches per inch shall be 13.

A Board of Trade Order provides that all women's underwear of the type covered in the standard must be manufactured to meet the requirements of the War Emergency British Standard Specifications BS/BOT 2, April, 1942.

The standard for women's blouses lists two series of sizes, one series having larger bust and waist measurements than the other. Minimum

The four British War Emergency Standards for women's clothing prepared by the British Standards Institution "to provide good coupon value" for rationed garments are:

BS/BOT 1—Women's Dresses
BS/BOT 2—Women's Underwear
BS/BOT 3—Women's Blouses
BS/BOT 6—Women's Boots and Shoes

The Board of Trade, for which the BSI prepared the standards, has the authority to make the standards mandatory for the manufacture of all garments in the classifications covered, and has already done so in the case of underwear and blouses.

Copies of the standards may be ordered through the American Standards Association Library.

finished garment measurements are given for each size for bust, waist, neck, center back neck to waist, cross back, shoulder seam, armhole circumference, inside sleeve length, forearm girth, etc. All the measurements for each size may be exceeded, the standard provides, but none shall be less than the minimum. Directions are given for the method of taking the measurements. This standard has been made mandatory by the British Board of Trade.

The fourth standard has to do with Women's Boots and Shoes of the lower and medium grades. The standard specifies the maximum number of pieces that should be used in making the shoes and minimum requirements relating to threads, fabric linings, fiber insole boards and stiffeners, toe caps, and other components. Any style of upper may be used provided it covers the foot and meets the minimum requirements set forth in the standard.

NBS Tests Samples Of Belting Leather

The physical and chemical properties of 17 samples of flat, vegetable-tanned commercial belting leather were studied recently at the National Bureau of Standards in connection with a proposed revision of Federal Specification KK-B-201. Robert B. Hobbs and Philip E. Tobias of the Bureau's Leather Section carried out the tests.

The Federal Specification requires that the stretch of the leather belting at a stress of 2500 lb per sq in. shall be determined on the specimens used for the tensile strength tests. It does not state, however, whether the machine shall be stopped for this measurement. One result of the recent studies was to indicate that the measurement should be made while the machine is running.

A direct development of the work is a new, simplified method for testing the cementing of laps and plies. The necessary equipment consists of two pairs of jaws, one fixed and the other movable, and suitable weights. The former method required a type of testing machine which was available only in a few laboratories.

In general, the National Bureau of Standards announces, the physical characteristics of the samples tested conformed fairly well to the requirements of the specification, except that six of the 17 had too much stretch.

Substitute Materials Show Need For Performance Specifications

"Entirely too many specifications in bid invitations are phrased in terms of specific materials, or specific construction, instead of being stated in terms of results to be accomplished. As the impact of war fans out and affects innumerable additional products, and as the need for using alternate materials grows, the advisability of revising specifications so as to make them more flexible also grows more urgent. Purchasing agents should take the lead in changing specifications wherever possible, so as to stimulate the development of alternate materials and release supplies of scarce materials even before they are placed under priorities."

—Raymond Reeves, Regional Business Consultant, San Francisco, in an article "Purchasing Agents Can Become Bottlenecks," *Domestic Commerce,* March 5, 1942.

Civil Aeronautics Administration Speaks for Standardization

The Civil Aeronautics Administration heartily approves the process of standardizing as applied to aircraft engines, Ralph S. White, chief of the Power Plant Section, Aircraft Engineering Division of the Administration, told the National Aeronautic Meeting of the Society of Automotive Engineers, March 13, 1941.

"The time may not be too distant," he said, "when the standardization and supply by aircraft engine manufacturers, even by the 'Little-Three,' of complete power units ready to install in the aircraft becomes a reality. From the economic standpoint, much can be said for such standardization. From the practical standpoint, it seems as if the engine manufacturer should be able to do this very nicely, at the same time giving his engine the well-known 'break' which, we usually understand from him, his engines do not get as normally installed. This would require much cooperation between the affected parties for its consummation and probably is suggesting a too radical method of doing things, but the idea is sound."

Traffic Signal Standard Provides Standard Colors

Traffic control signals have been the subject of standardization for many years, but the latest development is approval by the American Standards Association of the standard for Adjustable Face Traffic Control Signal Heads, prepared by the Institute of Traffic Engineers.

This standard gives detailed and scientific specifications for the colors used in traffic signal lenses, as well as requirements for construction of the housings, doors, and gasketing in which the lenses are held. The specifications, which cover the red, yellow, and green colors used in traffic signaling, are based on spectrophotometric data obtained by the Colorimetry Section of the National Bureau of Standards with defining glasses selected by the Committee on Standards and Specifications of the Institute of Traffic Engineers. Field tests conducted by this ITE committee showed that the red and green glasses defining colors best suited for traffic signaling were identical with the glasses selected by Committee VI of the Association of American Railroads' Signal Section to define the colors of lenses for use in railroad signaling.

The color specifications are developed according to the standard method provided in the new American War Standard on Color just approved by the American Standards Association. This War Standard provides that the standard observer and coordinate system adopted in 1931 by the International Commission on Illumination shall be used when color specifications are computed from spectrophotometric data. To help the purchaser in determining whether the signal lenses meet the standard specifications, the standard requires that the seller shall provide the purchaser with certified light and dark limit glasses calibrated by the National Bureau of Standards.

The American Standard, Adjustable Face Traffic Control Signal Head Standards (D10.1-1942) is available at 25 cents per copy.

WPB Requests War Standard For Industrial Equipment Instruments

A War Standards Project for the simplification and standardization of General Industrial Equipment Instruments has been requested by the War Production Board. The project as requested would deal particularly with sizes, mountings, and other general features, with special attention to voltmeters, ammeters, and voltameters. Action is needed urgently and immediately on standardization of 2½ and 3½-inch meters which are being purchased in large quantities by the combat forces, it was explained.

It is expected that the project will include work on standardization of sizes and dimensional features to permit interchangeability; simplificaton of constructional features exclusive of operating parts; investigation of possible standardization of electrical specifications; standardization of performance tests; and standardized nomenclature for labeling, and standardized packaging.

The new American War Standards project was authorized on June 27 and work has already been started on development of the standard.

OPA Tea Standards Help Determine Grades

Physical standards for different grades of Ceylon, India, and Java tea, made up of actual samples of the tea itself, have been established by the Office of Price Administration as a means of determining the various grades. The samples were necessary, it was found, in order to carry out the provisions of the Revised Price Schedule No. 91 on Tea, since there had been considerable trade confusion on tea grading. Acting upon requests from the trade, therefore, OPA appointed a committee of tea experts to meet in New York for the purpose of establishing actual tea standards which could be used in conjunction with the schedule.

Standards established by this committee include three varieties of Ceylon teas, three Indian and three Javas—each grading fine, medium, and fair.

The new standards are being offered for sale by the Tea Association of the United States of America, 82 Wall Street, New York at a cost of $2.50 per set of nine ¼-pound samples.

Ainsworth Is Vice-President Of New York Safety Council

Cyril Ainsworth, assistant secretary of the American Standards Association and in charge of the ASA safety work, has been elected vice-president of the Greater New York Safety Council. The Council is affiliated with the National Safety Council.

Frank L. Jones, vice-president of the Equitable Life Assurance Society, was re-elected president for a fourth term, and Clifford E. Paige, president, Brooklyn Union Gas Company, was elected chairman of the Executive Committee.

Screw Thread Standard Under War Procedure

The American War Standards Procedure is now being applied to the development of a standard for screw threads for high-temperature bolting (B1). Subcommittee 7 of the ASA Sectional Committee on Screw Threads (B1) is acting as the War Emergency Committee in charge of the project. The following members are taking part in development of the War Standard:

W. H. Gourlie, Pratt and Whitney Company, *Chairman*
Sabin Crocker, Detroit Edison Company
J. L. Davis, Erie Bolt and Nut Company
J. H. Edmonds, Bethlehem Steel Company
M. R. Kavanagh, Oliver Iron and Steel Corporation
P. V. Miller, Taft-Peirce Manufacturing Company
F. H. Morehead, Walworth Company
D. B. Rossheim, M. W. Kellogg Company
A. D. Sanderson, Standard Oil Development Company
P. G. Schultz, Crane Company

A draft standard has already been completed and is being circulated to key groups for comment before final approval.

OPA Standards Work Is Given Greater Prominence

Reorganization of the Office of Price Administration, which is taking place coincident with reorganization of the War Production Board, promises to give the OPA standards program a more prominent place in the OPA set-up. The Standards Section, which has heretofore been a subsection of the Consumer Division, will now, it is reported, be an OPA Division in its own right. It will be concerned with problems of quality maintenance and standardization in relation to price control.

W. S. MacLeod is head of the OPA Standards Section and reports to Dexter M. Keezer, assistant administrator.

It is expected that the American Standards Association will work closely with the new Standards Division in carrying out the terms of the contract which has just been completed between the ASA, the WPB, and the OPA (see article page 194).

New York City Bases Purchases On Standard Specifications

A Manual of Inspection, based on Standard Specifications approved by the Board of Standardization of the City of New York, has just been published for the guidance of the City Comptroller's staff in charge of inspecting all purchases made by the city prior to their acceptance and payment. In addition to serving as a guide to the Inspectors the Manual also furnishes information to the public and to the vendors who bid on City contracts.

The Standard Specifications, on which the Manual is based, are approved by the Board of Standardization of the City of New York, and are made part of all contracts and purchase orders. The Board was built up into an effective coordinating agency for the City's standard specifications by Dr. Russell Forbes, former Commissioner of Purchase of the City of New York.

SAE Has West Coast Branch

The Society of Automotive Engineers announces the establishment of a West Coast Branch Office at Los Angeles, California, under the direction of E. F. Lowe, SAE assistant general manager. Through this office services of the Society will be available to SAE members on the Pacific Coast and to the Society's Southern California, Northern California, Oregon, and Northwest Sections. The office is at 530 West Sixth Street, Los Angeles.

Civil Engineering Describes Proposed Live-Load Formula

A live-load reduction formula for buildings, proposed by ASA Sectional Committee A58 on Building Code Requirements for Minimum Design Loads in Buildings, is described in detail in *Civil Engineering*, April. This committee is preparing recommended basic requirements which may be used when local building codes are prepared or revised. General comment on the proposed formula is invited.

ASA Standards Activities

Standards Available Since Our June Issue

Adjustable Face Traffic Control Signal Heads American Standard D10.1-1942 25¢

Boiler Rivet Steel and Rivets (ASTM A-31-40) American Standard G28.1-1942 25¢

Carbon-Steel Plates for Stationary Boilers and Other Pressure Vessels (ASTM A70-39) American Standard G29.1-1942 25¢

Building Exits Code (Revision of A9-1940) American Standard A9.1-1942 $1.00
Lap-Welded and Seamless Steel Pipe for High-Temperature Service (ASTM A106-41) (Revision of B36.3-1940) American Standard B36.3-1942 25¢

Standards Approved Since Our June Issue

Adjustable Face Traffic Control Signal Heads American Standard D10.1-1942
Building Exits Code (Revision of A9-1940) American Standard A9.1-1942
Forged or Rolled Steel Pipe Flanges for General Service (ASTM A181-37) American Standard G46.1-1942
Gas-Burning Equipment in Power Boilers, Requirements for Installation American Standard Z21.33-1942
Gas Valves, Listing Requirements (Revision of Z21.15-1934) American Standard Z21.15-1942
Gypsum Plastering, Specifications, including Requirements for Lathing and Furring (Revision of A42.1-1938) American Standard A42.1-1942
Malleable Iron
  Malleable Iron Castings, Specifications (ASTM A47-33) American Standard G48.1-1942
  Cupola Malleable Iron, Specifications (ASTM A197-39) American Standard G49.1-1942
Refrigerators Using Gas Fuel, Approval Requirements (Revision of Z21.19-1936) American Standard Z21.19-1942
Textile Testing Machines, Specifications (ASTM D76-41) American Standard L15.1-1942
Wool Felt, Methods of Testing (ASTM D461-40) American Standard L16.1-1942
Wrought-Iron and Wrought-Steel Pipe and Tubing
  Electric-Resistance-Welded Steel Boiler and Superheater Tubes for High-Pressure Service (ASTM A226-40) American Standard B36.18-1942
  Electric-Resistance-Welded Steel and Open Hearth Iron Boiler Tubes (ASTM A178-40) American Standard B36.13-1942
  Lap-Welded and Seamless Steel and Lap-Welded Boiler Tubes (ASTM A83-40) American Standard B36.12-1942
  Medium-Carbon Seamless Steel Boiler and Super-heater Tubes (ASTM A210-40) American Standard B36.15-1942
  Seamless Alloy-Steel Boiler and Superheater Tubes (ASTM A213-40) American Standard B36.17-1942
  Seamless Steel Boiler Tubes for High-Pressure Service (ASTM A192-40) American Standard B36.14-1942
  Spiral-Welded Steel or Iron Pipe (ASTM A211-40) American Standard B36.16-1942

Standards Being Considered by ASA for Approval

Cast-Iron Pipe Flanges and Flanged Fittings, Class 250 (Revision of B16b-1928)
Coal Mines, Rock Dusting to Prevent Coal Dust Explosions (Reaffirmation of M13-1925)
Cold-Rolled Strip Steel (ASTM A109-38) G47
Colored Textiles, Fastness L14
Cranes, Derricks, and Hoists, Safety Code B30
Gas Floor Furnaces (CS99-42)
Identification Markings of Compressed Gas Cylinders, Proposed Standardization
Keyways for Holes in Gears B6.4
Lime
  Limestone, Quicklime, and Hydrated Lime, Methods of Chemical Analysis of (ASTM C25-29)
  Quicklime for Structural Purposes, Specifications for (ASTM C5-26)
Photography
  Distance Scales Marked in Feet Z38.4.3
  Double Plate Holders (Moulding Type) Z38.1.Q
  Focal Lengths of Lenses, Marking Z38.4.4
  Photographic Paper Roll Leaders and Limit Signals Z38.1.M
  Shutter Cable Release Tips and Sockets with Straight Threads Z38.4.6
  Shutter Cable Release Tips and Sockets with Tapered Threads Z38.4.5
  Tripod Connections for American Cameras Z38.4.1
  Tripod Connections for European Cameras with Adapter for American Tripods Z38.4.2
Pipe Threads (Revision of B2-1919)
Power-Operated Radio Receiving Appliances (UL 6th ed) (Revision of C65-1938)
Protection of Structures Containing Inflammable Liquids and Gases—Part 3 of Code for Protection Against Lightning (From status as American Tentative Standard to American Standard) C5, Part 3
Rotating Electrical Machinery on Railway Locomotives and Rail Cars and Trolley, Gasoline-Electric and Oil-Electric Coaches (Revision of C35-1936) C35

Standards Submitted for Consideration Since Our June Issue

Code for Pressure Piping (Revision of B31.1-1935)
Electrical Insulating Materials
  Laminated Round Rods Used in Electrical Insulation (ASTM D349-39 C59.15
  Laminated Tubes Used in Electrical Insulation (ASTM D348-39 C59.14
  Sheet and Plate Materials Used in Electrical Insulation (ASTM C229-39) C59.13
Fire Tests of Building Construction and Materials (ASTM C19-41) (Revision of A2-1934)
Fire Tests of Door Assemblies (ASTM C152-41) A2.2
Metal Cleaning Sanitation, Code of Recommended Good Practices
Weather-Resistant (Weatherproof) Wire and Cable, URC Type (Revision of C8.18-1936)

Approval of Standard Withdrawn

Safety Code for Colors for Traffic Signals D3-1927

American War Standards

Standards Approved and Published

Accuracy of Engine Lathes B5.16-1941 25¢
Allowable Concentration of Cadmium Z37.5-1941 20¢
Domestic Gas Ranges, Approval Requirements Z21.1ES-1942 $1.00
Quality Control
  Guide for Quality Control Z1.1-1941
  Control Chart Method of Analyzing Data Z1.2-1941
  } In one Volume 75¢
Photographic Exposure Computer Z38.2.2-1942 $1.00

Standards Available Since Our June Issue

Color, Specification and Description Z44-1942 25¢
Control Chart Method of Controlling Quality During Production Z1.3-1942 75¢
Gas Water Heaters, Approval Requirements Z21.10WS-1942 $1.00
Machine Tool Electrical Standards C74-1942 40¢

Standards Under Way

Allowable Concentration of Ether Z37
Allowable Concentration of Manganese Z37
Allowable Concentration of Xylene Z37
Allowable Concentration of Xylol Z37
Color Fastness of Textiles, Terminology L14
Military Radio Equipment and Parts C75
Packages for Electronic Tubes Z45
Protective Lighting of Industrial Plants A85

New Projects Approved

Electrical Measuring Instruments
General Industrial Equipment Instruments
Protective Occupational Footwear
Screw Threads for High-Temperature Bolting B1

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Machine Tool Electrical Standards (C74-1942) .....40¢

WPB Order L-147 requires electrical wiring on machine tools to conform to the new American Standard. WPB says "the standard has been found to provide satisfactory electrification for most purposes, and only under special conditions will machine tool builders be authorized to produce tools which do not comply with these specifications."

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